Archaeological Desk-Based Assessment in Relation to the Proposed Developments at Milton Road, Keary Road, Gilbert Road, Swanscombe and Mead Crescent, Dartford, Kent.

March 2019

Archaeological Desk-Based Assessment in Relation to the Proposed Developments at Milton Road, Keary Road, Gilbert Road, Swanscombe and Mead Crescent, Dartford, Kent.

Report for Dartford Borough Council

Date of Report: 22nd March 2019

SWAT ARCHAEOLOGY

Swale and Thames Archaeological Survey Company

School Farm Oast, Graveney Road

Faversham, Kent ME13 8UP

Tel; 01795 532548 or 07885 700 112

www.swatarchaeology.co.uk

Contents

1 INTRODUCTION 8
1.1 Project Background 8
1.2 The Site 9
1.3 The Proposed Development 12
1.4 Project Constraints 12
1.5 Scope of Document 12
2 PLANNING BACKGROUND 12
2.1 Introduction 12
2.2 National Planning Policy Framework (NPPF) 13
2.3 Local Policies 14
3 AIMS AND OBJECTIVES 18
3.1 Introduction 18
3.2 Desk-Based Assessment – Chartered Institute for Archaeologists (2017) 18
4 METHODOLOGY 20
4.1 Introduction 20
4.2 Sources 20
5 ARCHAOLOGICAL AND HISTORICAL DEVELOPMENT 21
5.1 Introduction 21
5.2 Area Archaeological and Historical Narrative 24
6 PDA 1, MILTON ROAD, SWANSCOMBE 30
6.1 PDA 1 Archaeological Narrative 30
6.2 PDA 1 Cartographic Sources and Map Regression 32
6.3 PDA 1 Aerial Photographs 35
7 PDA 2, KEARY ROAD, SWANSCOMBE 35
7.1 PDA 2 Archaeological Narrative 35
7.2 PDA 2 - Cartographic Sources and Map Regression 38
7.3 PDA 2 - Aerial Photographs 40
8 PDA 3, GILBERT CLOSE, SWANSCOMBE 41
8.1 PDA 3 Archaeological Narrative 41
8.2 PDA 3 - Cartographic Sources and Map Regression 43
8.3 PDA 3 - Aerial Photographs 44
8.4 Summary of Potential for PDA 1, 2 and 3 45
9 PDA 4, MEAD CRESCENT, DARTFORD 49
9.1 PDA 4 Archaeological Narrative 49
9.2 PDA 4 - Cartographic Sources and Map Regression 51
9.3 PDA 4 - Aerial Photographs 53
9.4 PDA 4 - Summary of Potential 53
10 IMPACT ASSESSMENT 57
10.1 Introduction 57
10.2 Historic Impacts 57
11 SIGNIFICANCE 58
11.1 Introduction 58

11.2 Significance Criteria 59
12 ARCHAEOLOGICAL MITIGATION 61
12.1 Introduction 61
13 OTHER CONSIDERATIONS 61
13.1 Archive 61
13.2 Reliability/Limitations of Sources 62
13.3 Copyright 62
14 REFERENCES 63
14.1 Bibliographic 63
14.2 Websites 64
15 APPENDIX 1 – KCC HER Data (see Figures 19-25). 81

List of Plates

Plate 1. Aerial photograph from 1940, PDA 1, 2 & 3
Plate 2. Aerial photograph from 1960, PDA 1, 2 & 3
Plate 3. Aerial photograph from 1990, PDA 1, 2 & 3
Plate 4. Aerial photograph from 2003, PDA 1, 2 & 3
Plate 5. Aerial photograph from 2018, PDA 1, 2 & 3
Plate 6. Aerial photograph from 1940, PDA 4
Plate 7. Aerial photograph from 1990
Plate 8. Aerial photograph from 2018

List of Figures

Fig.1 Location Maps
Fig.2 Andrews, Dury and Herbert map from 1769, PDA 1, 2 & 3
Fig.3 Hasted, 1798, PDA 1, 2 & 3
Fig.4 Ordnance Surveyors Drawing, 1797, PDA 1, 2 & 3
Fig.5 Swanscombe Tithe Map 1843, PDA 1, 2, & 3
Fig.6 Historic mapping OS 1872, PDA 1, 2, & 3
Fig.7 Historic mapping OS 1898, PDA 1, 2, & 3
Fig.8 Historic mapping OS 1908, PDA 1, 2, & 3
Fig.9 Historic mapping OS 1923, PDA 1, 2, & 3
Fig.10 Historic mapping OS 1946, PDA 1, 2, & 3
Fig.11 Andrews, Dury and Herbert map from 1769, PDA 4
Fig.12 Hasted, 1798, PDA 4
Fig.13 Ordnance Surveyors Drawing, 1797, PDA 4

Fig.14 Dartford Tithe Map 1840, PDA 4

Fig.15 Historic mapping OS 1898, PDA 4

Fig.16 Historic mapping OS 1910, PDA 4

Fig.17 Historic mapping OS 1930, PDA 4

Fig.18 Historic mapping OS 1938, PDA 4

Fig.19 Gazetteer Kent HER Records, All PDAs

Fig.20 KHER Records Map- PDA 1

Fig.21 KHER Records Map- PDA 2

Fig.22 KHER Records Map- PDA 3

Fig.23 KHER Records Map- PDA 4

Fig.24 KHER Historic Landscape Character, PDA 1, 2 & 3

Fig.25 KHER Historic Landscape Character, PDA 4

Archaeological Desk-Based Assessment in Relation to the Proposed Developments at Milton Road, Keary Road, Gilbert Road, Swanscombe and Mead Crescent, Dartford, Kent.

Summary

SWAT Archaeology has been commissioned by Dartford Borough Council to prepare an Archaeological Desk-Based Assessment in relation to the Proposed Developments at Milton Road (PDA 1), Keary Road, (PDA 2), Gilbert Road (PDA 3), Swanscombe and Mead Crescent (PDA 4), Dartford, Kent.

This Desk Based Assessment is intended to explore and disseminate the known and potential heritage resource within the site and the surrounding area, and to assess the likely impacts of the development proposals on this resource. Based on this data the potential for archaeological sites either on or in the near vicinity of the proposed development can be summarized as:

	PDA 1	PDA 2	PDA 3	PDA 4
Prehistoric:	**high**	**high**	**high**	**moderate/high**
Iron Age:	**low**	**low**	**low**	**low**
Roman:	**moderate**	**high**	**low**	**moderate**
Anglo-Saxon:	**low**	**low**	**low**	**low**
Medieval:	**low**	**low**	**low**	**low**
Post-Medieval:	**low**	**low**	**low**	**low**
Modern:	**low**	**low**	**low**	**low**

PDAs 1, 2 and 3 are located in Swanscombe and PDA located in Dartford. Swanscombe is well known for its discovering of the Swanscombe skull, being one of only two sites in Britain where actual remains for the early Palaeolithic period has been found and is therefore of national significance. Quarrying in the area surrounding Swanscombe has led to an extraordinary large number of Palaeolithic finds, usually in the form of handaxes. However, the majority were found in antiquity with very little by way of provenance or location. Modern excavations in the area have identified that areas of the Palaeolithic levels do still exist and are able to provide

information regarding flora and fauna as well. In addition to the Palaeolithic period, south east of Swanscombe is the Roman town of Vagniacae. This has led to Roman activity being found in the area east of Swanscombe. North west of PDA 1 and immediately north east of PDA 2 is a roman building. In the Medieval period until the late 19th century, all three Swanscombe PDAs were rural. In the late 19th century, Swanscombe became a highly industrialised area with gravel and chalk pits for the cement industry and Swanscombe grew extremely quickly with worker housing and by the 1960s, all three Swanscombe PDAs had become car parking areas for the housing. By the second half of the 20th century most of the pits had gone out of use.

Despite the abundance of archaeological potential in Swanscombe, it is unlikely that any archaeology will be found at PDA 1 as it was a pit in the late 19th century and was subsequently levelled and filled. PDA 2 is extremely close to Roman and Palaeolithic remains. In addition, it appears possible that despite British Geological Survey maps, that PDA 2 in in an area where Boyn Hill gravels relating to the Palaeolithic period map exist and remained rural until the 1960s when the area was tarmacked for car parking. Therefore, PDA is within an area of high archaeological potential. PDA 3 is located immediately south of the Barnfield Pit where the Swanscombe Skull was found and also may be in an area where the Palaeolithic gravels still exist. The area remained rural, on the edge of the quarry until the 1960s when Gilbert Close was built and the PDA was tarmacked for car parking. Therefore PDA 3 is also in an area of high archaeological potential. Given the national significance and high Palaeolithic potential it is recommended that a specialist Palaeolithic desk-based assessment is also carried out. The development at these sites is for residential housing and aside from PDA 1, the development is likely to have a high impact on any potential archaeology at PDA 2 and 3, of which could be of national significance. The need for, scale, scope and nature of any further assessment and/or archaeological works should be agreed through consultation with the statutory authorities.

PDA 4 is located in an area off Mead Crescent in Dartford, to the south west of its historical core surrounded by residential housing and garden in an area that used to be a council depot. The River Darent passes through the town on a north-south axis and PDA 4 is situated on the western slopes of the river terrace with the river Darent passing some 700m to the east of the PDA. The river valley of the Darent has attracted humans for millennia. A significant number of Palaeolithic handaxes has been found in the area to the east and south east, much from unstratified ground in antiquity. Recent archaeological excavation confirms the evidence of

Palaeolithic river gravels for the area. The attractiveness of the wider area continued into the Neolithic, Bronze Age and Roman periods. A Roman villa site is just to the south east of the PDA and excavations reveal Roman field systems in the area surrounding the villa. Dartford is thought to be one of the earliest Saxon towns in Kent and its importance continues into the Medieval and Post Medieval periods, although the area around the PDA was on the outskirts of the town and was put to agricultural use in this period. By the early 20th century, Dartford was growing and a housing estate was built in the area of the PDA in the 1930s. The site appears to have had a couple of buildings located along the western boundary of the site, with the remainder as a concreted courtyard, parking area.

It is not certain if the Palaeolithic gravels extend this far from the river but given the finds within the assessment area, the Palaeolithic potential is considered to be moderate/high. Also given the proximity of the Roman villa, there is a moderate chance of finds remains from this period. All other periods are considered to be low. The development of PDA 4 for residential housing is likely to have a high impact on any potential archaeology. The need for, scale, scope and nature of any further assessment and/or archaeological works should be agreed through consultation with the statutory authorities.

1 INTRODUCTION

1.1 Project Background

1.1.1 Swale & Thames Survey Company (SWAT) was commissioned by Dartford Borough Council (the 'Client), to carry out an archaeological desk-based assessment in relation to a number of proposed development areas (the PDA) (Fig. 1). These sites are as follows:

- PDA 1 - Milton Road, Swanscombe, National Grid Reference (NGR) centred on TQ 60269 74478;
- PDA 2 - Keary Road, Swanscombe, National Grid Reference centred on TQ 60577 73752;
- PDA 3 - Gilbert Road, Swanscombe, National Grid Reference centred on TQ 59748 74227;

- PDA 4 - Mead Crescent, Dartford, centred on National Grid Reference (NGR) TQ 53877 73238.

1.2 The Site

1.2.1 PDAs 1, 2, and 3 are located in Swanscombe, which is 5km east of Dartford and 4km west of Gravesend. Swanscombe is situated on the north Kent coast by the Thames estuary, with the Ebbsfleet Stream passing to the east, which separates Swanscombe from Northfleet. London is 18 miles to the north west. Dartford is also situated on the north Kent coast by the Thames estuary, with the River Darent passing through the town on a north-south axis (Fig. 1).

PDA 1 – Milton Road

1.2.2 PDA 1 is located on the northern side of Milton Road some 500m north west of the centre of Swanscombe. The PDA is current accessed via a 100m tarmacked track from the eastern end of Broomfield Road. The site current consists of an area car parking at the rear of residential properties and garages facing Milton Road which form the southern boundary. From Milton Road, there is currently a footpath to the PDA. The western boundary includes workshops as well as garages. The PDA is on level ground at an average of 31m aOD.

PDA 2 – Keary Road

1.2.3 PDA 2 is located at the southern end of Keary Road at the corner with the eastern end of Leonard Avenue, some 260m south east of the centre of Swanscombe. Access to the PDA is along a 130m tarmacked track in Leonard Avenue at the rear of residential houses. The PDA is currently used as car parking. Residential houses border the site on the western and north eastern boundaries with allotments bordering the southern and south eastern boundaries. To the north is a grassed area and pavements. The PDA is on level ground at an average of 41m aOD.

PDA 3 – Gilbert Close

1.2.4 PDA 3 is located at the north eastern end of Gilbert Close some 700m west, north west of the centre of Swanscombe. The PDA is currently tarmac and concrete and used as car parking. To the south west and south east are residential houses, the north western boundary is allotments with Swanscombe National Park to the north east. The PDA is on level ground at an average of 36m aOD.

PDA 4 – Mead Crescent

1.2.5 PDA is located circa 900m south east of the centre of Dartford, accessed via a short access point in between residential houses in Meads Crescent. The PDA is currently unused and is a tarmacked area previously used for a council depot. The entire PDA is surround by the rear gardens of residential properties. The PDA gently slopes downwards from west to east at an average of 19m aOD.

Geology

1.2.6 The British Geological Society (BGS 1995) shows that the local geology at Milton Road as Lewes Nodular Chalk formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated). The PDA borders an area of Superficial deposits of Boyn Hill Gravel member – Sand and Gravel. These deposits are were formed as part of the River Thames floodplain as the river and any tributaries would have altered their course over time. However, the British Geological survey is of low resolution and not sufficiently detailed as gravels can extend beyond areas mapped by the BGS. PDA 2 and 3 lie in an area of Thanet Formation Sand which covers a patch in the southern part of Swanscombe. It is of early to mid-Thanetian (late Palaeocene) age and overlies chalk. No superficial deposits are recorded at the site in PDA 2 but PDA is within an area recorded as an area of Superficial deposits of Boyn Hill Gravel member – Sand and Gravel.

1.2.7 PDA 4 lies on bedrock of Lewes Nodular Chalk formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated). It lies within an area not recorded as having superficial deposits but immediately to the west are Boyn Hill Gravels and to the east deposits of Alluvium - Clay, Silt, Sand and Gravel which are deposits are were formed as part of the River Darent floodplain and these gravels can contain Holocene alluvium. As mentioned previously, the British Geological survey is of low resolution and not sufficiently detailed as gravels can extend beyond areas mapped by the BGS.

1.2.8 Boyn Hill deposits are of the Middle Pleistocene period and consist of loam, sand and gravel laid down by the Thames between 450,000 and 350,000 BP. Recent fieldwork in the area has extended the reach of the Boyn Hill deposits beyond that of seen in the BGS maps.

Stratigraphy

1.2.9 The stratigraphy of the Boyn Hill gravels in the Swanscombe area has been mapped. At OD heights of 32-34m ovate handaxes and Acheulian debitage can be found. In gravel between 26.5m – 32m, which is considered the Swanscombe skull level, Acheulian handaxes, cores and flakes tools are seen. At the lowest levels of 22m-26.5m, is considered the Clactonian period consisting of cores, debitage and occasionally flakes tools.

Geotechnical Information

1.2.10 Given the Palaeolithic potential of the wider area around Dartford and Swanscombe, in recent years as well as archaeological excavation a number of geotechnical pits have been investigated in the area.

1.2.11 In Broomfield Road, to the north west of PDA 1, three boreholes were taken in 1975 (BGS -TQ67SW420; TQ67SW421; TQ67SW422). These were to a depth of 3m and consisted of some made ground of tarmac, brick and gravel at the top with either brown sandy clay underneath and/or underneath that gravel in a brown sandy clay matrix.

1.2.12 A borehole circa 150m south of PDA 2 (BGS – TQ67SW35) had sand and gravel reaching chalk at a depth of 25m.

1.2.13 At PDA 4, a borehole virtually next to the PDA from 1963 (BGS – TQ57 SW292) identified a mix of brown sandy clay and gravel, reaching brown clayey chalk at a depth of circa 7m and hard chalk at circa 12m.

1.2.14 Circa 400m south of PDA 4, geotechnical pits identified a sequence of topsoil, subsoil and alluvial layers. The alluviums were circa 1.6m thick to a depth with the lowest deposit at 9.12m OD or 3.1m below ground level. Overlying this was a colluvial sequence, the lower levels of which contained burnt clay and fire-cracked flint with Roman building material in the upper level of this layer, the upper colluvial sequence contained Post Medieval building material. No Palaeolithic activity was found. The ground level on this site is circa 5m lower than that of PDA 4. (*Unpublished document: Archaeology South-East. 2008. An Archaeological Evaluation at Oakfield Infant's and Junior's School, Dartford, Kent).*

1.3 The Proposed Development

1.3.1 The proposed development for all four sites is for residential houses. PDA 1 is for 10 two-bedroom flats. PDA 2 is for 6 x 2 Bed Flats @ 70m2 & 4 x 1 Bed Flats. PDA 3 is for 10 3 bed houses and PDA 4 is for 3 one bed bungalows.

1.4 Project Constraints

1.4.1 No constraints were associated with this project.

1.5 Scope of Document

1.5.1 This assessment was requested by the Client in order to determine, as far as is possible from existing information, the nature, extent and significance of the Historic Environment and to assess the potential impact of development on Heritage Assets. The assessment forms part of the initial stages of the archaeological investigation and is intended to inform and assist with decisions regarding archaeological mitigation for the proposed development and associated planning applications.

2 PLANNING BACKGROUND

2.1 Introduction

2.1.1 National legislation and guidance relating to the protection of, and proposed development on or near, important archaeological sites or historical buildings within planning regulations is defined under the provisions of the Town and Country Planning Act 1990. In addition, local authorities are responsible for the protection of the historic environment within the planning system and ensure than a Heritage Asset is protected to enable it to be passed on to future generations.

2.1.2 Statutory protection is also provided to certain classes of designated heritage assets under the following legislation:

- Planning (Listed Buildings and Conservation Areas) Act 1990;
- Ancient Monuments and Archaeological Areas Act 1979; and
- Hedgerow Regulations (statutory Instrument No. 1160) 1997

- Treasures Act 1996
- Burial Act 1857.

2.2 National Planning Policy Framework (NPPF)

2.2.1 The National Planning Policy Framework (NPPF) sets out the Government's core principles in relation to planning and the historic environment and is covered in section 16, paragraphs 185-202. These principles are designed to underpin the planning and decision-making process to ensure that Local Planning Authorities (LPA), developers and owners of heritage assets adopt a consistent approach to the conservation of the Historic Environment.

2.2.2 The Historic Environment, as defined in the National Planning Policy Framework (NPPF 2018): Annex 2, comprises:

'all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.'

2.2.3 NPPF Annex 2 defines a Heritage Asset as:

'a building monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets and assets identified by the local planning authority (including local listing)'.

2.2.4 Paragraph 189 of the NPPF states that:

'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting.'

2.2.5 Paragraph 190 of the NPPF states that:

'The LPA should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.'

2.2.6 The NPPF further provides definitions of terms which relate to the historic environment in order to clarify the policy guidance given. For the purposes of this report, the following are important to note:

- **Significance.** The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

- **Setting**. The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

2.2.7 The NPPF is supported by the Planning Policy Guidance, which includes Conservation Principles, Policy and Guidance (2008) as well as Good Practice Advice in Planning Notes 1 to 3, all issued by Historic England.

2.3 Local Policies

2.3.1 Dartford Borough Council has a Local Plan document called Dartford Development Policies Plan, adopted July 2017. In addition, the council has a Core Strategy, being the over-arching Local Plan document for the Borough, adopted in September 2011, which sets outs the fundamental development priorities in Dartford. Both plan documents have a time horizon until 2026. The Development Policies Plan conforms with national planning policy contained in the NPPF and has a number of policies relevant to archaeology and heritage:

- POLICY DP11.2: Sustainable Technology & Construction

- POLICY DP12: Historic Environment Strategy

- POLICY DP13: Designate Heritage Assets

2.3.2 These policies are covered in greater detail below:

POLICY DP11.2: Sustainable Technology and Construction

2.3.3 In determining applications for small and large-scale low/zero carbon technology and installations, the economic and environmental benefits of the proposal will be weighed against the individual and cumulative impact of the development. Development will only be permitted in line with national policy and where the following factors have been satisfactorily taken into consideration:

a) Character, and visual and residential amenity

b) Landscape, topography, and heritage

c) Shadow flicker and glare (if relevant)

d) Electronic and telecommunication interference/ navigation and aviation issues (if relevant)

e) Quality of agricultural land taken (where applicable)

f) Ensuring installations are removed when no longer in use and land is then restored.

g) Potential effects on Policies Map designations/ protected sites or areas in the Borough including Green Belt, heritage assets, and SSSIs/areas of high biodiversity value, and

h) Other relevant local environmental and amenity factors accounting for mitigations proposed, for example in relation to biodiversity.

POLICY DP12: Historic Environment Strategy

2.3.4 Development should contribute to the conservation and enjoyment of the Borough's historic environment. The Local Planning Authority will work with developers on strategies to realise this in the context of site heritage opportunities and constraints.

2.3.5 Where heritage may be at risk, landowners will be expected to work proactively with the Local Planning Authority in bringing forward proposals to preserve or enhance these assets, to facilitate their successful rehabilitation and seek their viable reuse consistent with their heritage value and special interest.

2.3.6 Development proposals which may affect the significance of heritage assets (both designated and non-designated) or their setting should demonstrate how these assets will be protected, conserved or enhanced as appropriate. Proposals should aim to reflect and interpret the historic character of a site and conserve its most significant historical and/or architectural aspects.

2.3.7 A heritage statement should accompany all planning applications affecting heritage assets. On archaeological sites, a desk-based assessment will be required as a minimum. Applications affecting non-designated assets will be assessed against the criteria below.

2.3.8 The Borough's non-designated assets include:

a) Archaeological sites, including sites holding an interest as defined in the NPPF;

b) Applicable sites within Areas of Special Character, as defined on the Policies Map;

c) Sites with significant industrial heritage;

d) Land with historic Landscape Character;

e) Historic open space, parks and gardens.

2.3.9 Development proposals affecting non-designated heritage assets should establish the asset's significance. Development should conserve or enhance those aspects that have been identified as significant and, where possible, should seek to better reveal an asset's significance.

2.3.10 In determining planning applications affecting non-designated assets, the effect of the proposal on the asset's significance will be taken into account. A balanced judgement will be taken having regard to the significance of the heritage asset and the scale of any harm or loss of significance. Development resulting in total loss of significance will not normally be permitted.

POLICY DP13: Designated Heritage Assets

2.3.11 Designated heritage assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance. A heritage statement should

establish the significance of the heritage asset in order to enable the assessment the impact of a development proposal. Any harm or loss will require clear and convincing justification.

2.3.12 In determining planning applications, the Local Planning Authority will pay close attention to:

a) The significance of the heritage asset

b) The desirability of maintaining and, where possible, enhancing significance; and

c) the desirability of ensuring viable uses are found for heritage assets, consistent with their conservation.

2.3.13 Where a proposal will lead to substantial harm or total loss of significance, permission will be refused unless it can be clearly demonstrated that the development is necessary for substantial public benefits to be achieved that will outweigh the harm or loss

2.3.14 Where a proposal will lead to less than substantial har, this will be weighed against the public benefits of the proposal.

2.3.15 Listed Buildings – Development proposals affecting statutorily listed buildings should have special regard to the desirability of preserving the building or its setting. Loss of or harm to a statutorily listed building or its setting will only be permitted in exceptional circumstances in line with 2.3.13 and 2.3.14 above.

2.3.16 Conservation Areas – Development proposals affecting a conservation area should pay special attention to the desirability of preserving or enhancing the character or appearance of that are. Proposals that would result in harm or loss of significance will be determined in line with 2.3.13 and 2.3.14 above.

2.3.17 The demolition of any building in a conservation area will only be permitted where it is clear that it will not adversely affect the character and appearance of the area.

2.3.18 Scheduled Monuments – Development proposals affecting scheduled monuments will only be permitted where they clearly conserve the asset or

enhance its significance. Proposals resulting in loss or harm will only be permitted on a wholly exceptional basis and in line with clauses 2.3.13 and 2.3.14 above.

POLICY DP25 – Nature Conservation and Enhancement

2.3.19 Development on the hierarchy of designated sites, featuring nationally recognised and locally protected sites, will not be permitted. Development located within close proximity to designated sites, or with likely effects on them, should demonstrate that the proposal will not adversely impact on the features of the site that define its value or ecological pathways to the site.

Local Planning Guidance

2.3.20 The Kent Design Guide, 2008. Prepared by the Kent Design Group, it provides the criteria necessary for assessing planning applications. Helps building designers, engineers, planners and developers achieve high standards of design and construction. It is adopted by the Council as a Supplementary Planning Document.

3 AIMS AND OBJECTIVES

3.1 Introduction

3.1.1 This Desk-Based Assessment was commissioned by Dartford Borough Council to support a planning application. This assessment has been prepared in accordance with guidelines set out by the Chartered Institute for Archaeologists (see below) and in the National Planning Policy Framework and the Good Practice Advice notes 1, 2 and 3, which now supersedes the PPS 5 Practice Guide, which has been withdrawn by the Government.

3.1.2 This Desk-Based Assessment therefore forms the initial stage of the archaeological investigation and is intended to inform and assist in decisions regarding archaeological mitigation for the development and associated planning applications.

3.2 Desk-Based Assessment – Chartered Institute for Archaeologists (2017)

3.2.1 This desktop study has been produced in line with archaeological standards, as defined by the Chartered Institute for Archaeologists (2014, revised 2017). A desktop, or desk-based assessment, is defined as being:

'Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct and other relevant regulations of CIfA. In a development context desk-based assessment will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so) and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.'

(2017:4)

3.2.2 The purpose of the desk-based assessment is, therefore, an assessment that provides a contextual archaeological record, in order to provide:

- *an assessment of the potential for heritage assets to survive within the area of study*
- *an assessment of the significance of the known or predicted heritage assets considering, in England, their archaeological, historic, architectural and artistic interests*
- *strategies for further evaluation whether or not intrusive, where the nature, extent or significance of the resource is not sufficiently well defined*
- *an assessment of the impact of proposed development or other land use changes on the significance of the heritage assets and their settings*
- *strategies to conserve the significance of heritage assets, and their settings*
- *design strategies to ensure new development makes a positive contribution to the character and local distinctiveness of the historic environment and local place-shaping*

- *proposals for further archaeological investigation within a programme of research, whether undertaken in response to a threat or not.*

CIFA (2017:4)

4 METHODOLOGY

4.1 Introduction

4.1.1 The methodology employed during this assessment has been based upon relevant professional guidance including the Chartered Institute for Archaeologists' *Standard and guidance for historic environment desk-based assessment* (CIfA, 2017).

4.2 Sources

4.2.1 A number of publicly accessible sources were consulted prior to the preparation of this document.

Archaeological databases

4.2.2 Although it is recognised that national databases are an appropriate resource for this particular type of assessment, the local Historic Environmental Record held at Kent County Council (KCCHER) contains sufficient data to provide an accurate insight into catalogued sites and finds within both the proposed development area and the surrounding landscape.

4.2.3 The National Heritage List for England (NHLE), which is the only official and up to date database of all nationally designated heritage assets and is the preferred archive for a comprehensive HER search.

4.2.4 The Archaeology Data Service Online Catalogue (ADS) was also used. The search was carried out within a 500m radius of the proposed development site and relevant HER data is included in the report. The Portable Antiquities Scheme Database (PAS) was also searched as an additional source as the information contained within is not always transferred to the local HER.

Cartographic and Pictorial Documents

4.2.5 A full map regression exercise has been incorporated within this assessment. Research was carried out using resources offered by the Kent County Council, the

internet, Ordnance Survey and the Kent Archaeological Society. A full listing of bibliographic and cartographic documents used in this study is provided in Section 10.

Aerial photographs

4.2.6 The study of the collection of aerial photographs held by Google Earth was undertaken (Plates 1-8).

Secondary and Statutory Resources

4.2.7 Secondary and statutory sources, such as regional and periodic archaeological studies, archaeological reports associated with development control, landscape studies, dissertations and research frameworks are considered appropriate to this type of study and have been included within this assessment.

5 ARCHAOLOGICAL AND HISTORICAL DEVELOPMENT

5.1 Introduction

5.1.1 This section of the assessment will focus on the archaeological and historical development of the area, placing it within a local context. Each PDA will then be covered separately. Each period classification will provide a brief introduction to the wider landscape (500m radius centred on each PDA), followed by a full record of archaeological sites, monuments and records within the site's immediate vicinity. There is some overlap between the assessment areas of PDA 1, 2 and 3. Time scales for archaeological periods represented in the report are listed in Table 1.

5.1.2 The Kent HER records within the 500m assessment cover all periods from the Palaeolithic to the Modern. A number were discovered in antiquity as well as finds found in recent years. The table in Figure 19 details all the KHER data in the different assessment areas. The maps for each PDA site for the KHER records are provided in Fig. 20 for PDA 1, Fig. 21 for PDA 2, Fig. 23 for PDA and Fig.24 for PDA 4.

Prehistoric	Palaeolithic	*c*. 500,000 BC – *c*.10,000 BC
	Mesolithic	*c*.10,000 BC – *c*. 4,300 BC
	Neolithic	*c*. 4.300 BC – *c*. 2,300 BC
	Bronze Age	*c*. 2,300 BC – *c*. 600 BC
	Iron Age	*c*. 600 BC – *c*. AD 43
Romano-British		*c*. AD 43 – *c*. AD 410
Anglo-Saxon		AD 410 – AD 1066
Medieval		AD 1066 – AD 1485
Post-medieval		AD 1485 – AD 1900
Modern		AD 1901 – present day
Table 1: Classification of Archaeological periods		

Previous Archaeological Works, PDA 1, 2 & 3

5.1.1 Given the Palaeolithic importance of the area in Swanscombe, there has been a large number of non-intrusive and intrusive archaeological events in the assessment area. Focus on some key intrusive events are provided below.

5.1.2 Barnfield quarry to the west of PDA1 and north of PDA 3 is an area of national archaeological importance due to the finding of the Swanscombe skull, one of only two sites in England with Lower or Middle Palaeolithic evidence. As well as human remains the site has provided Quaternary evidence of lithic, faunal and palaeo-environmental remains. Immediately to the west of PDA 3 are the Alkerden Allotments and these are considered to be an area that has not been quarried and it likely to have Boyn Hill deposits remaining undisturbed. The site has been of interest since the late 219th century for artefact hunters and throughout the 20th century has been subject to further investigations, especially following the finding of a piece of the Swanscombe skull in the 1930s, which lead to further pieces being found in the 1950s.

5.1.3 In 2002, test pitting was carried out in various places at the northern end of the Eastern Quarry area. Test pits 1 and 2 are closest to PDA 3, whilst test pit 6 and 7 are closest to PDA 2. Test pit 6 confirmed the Holocene started at a depth of circa 34.5m OD with the Pleistocene at a depth of 33.8m OD although no finds were found. Slightly further away from PDA 2 at pit 7, the Pleistocene levels started 31.4m OD, with three handaxes found at a level of circa 28.65m OD. Pits 1 and 2 near to PDA 3, were less clear as to finding Pleistocene levels and no finds were found concluding in this area that the archaeologically significant deposits of the

Boyn Hill formation are not present south of PDA 3 (*Unpublished report: Wenban-Smith.2002. Eastern Quarry, Swanscombe: Preliminary Palaeolithic /Pleiocestocene Field Evaluation Report. Department of Archaeology, University of Southampton*).

5.1.4 Swanscombe Valley Community School to the north east of PDA 2, found in a 1997 evaluation by the Canterbury Archaeological Trust found fluvial deposits in an area mapped as Thanet Sand by BGS suggesting the Palaeolithic despots extended further south than expected. The area evaluation was located circa 200-350m north east from PDA 2. Finds included worked Palaeolithic flints, late Prehistoric features, Iron Age pottery, a Roman road as well as evidence of Roman structures including robbed out mortared flint footings, along with Roman pottery. The archaeological horizon for Roman remains was circa 27.5m OD. The handaxe in trench L was found circa 27.8m OD *(Unpublished Document: Canterbury Archaeological Trust. 1997. Swanscombe Thameside Community School: Archaeological Evaluation).*

5.1.5 Later in 1997, further investigation by MOLA at the school site north east of PDA 2, found a rectangular walled enclosure of Roman date thought to be a base for a monument or shrine, which was later an area for a small farmstead. Then containing timber buildings and a corn drier for the processing of wheat and barley. Nearby a pit contained cremated human remains. The Roman foundations were then thought to have been robbed in the 11th/12 century *(Unpublished Document: MOLA. 2010. A Romano-British Site at Swanscombe, Kent).*

5.1.6 The area to the west of PDA 1 in what was the location of Craylands Pit (west) in a 2001 evaluation in the area of the Craylands Lane Primary School confirms that the Palaeolithic levels were quarried away in the late 19th century (Unpublished Document: Wenban-Smith. 2001. Craylands Lane (west Primary School, Swanscombe Field Evaluation Report (Palaeolithic)).

Landscape Characterisation, PDA 1, 2 &3

5.1.7 The PDA sits within an area of Post 1810 settlement. To the west, east and north west are areas of active and disused quarries. The general area is one of urbanisation that started in the Victorian period and continued throughout the 20th century initially to support workers for the nearby quarries (Fig. 24).

Scheduled Monument

5.1.8 Whilst outside of the assessment area for all three PDA sites in Swanscombe, given its importance it is worth commenting upon. To the east of PDA 1, 2 and 3, circa 750m, 850m and 1,300m away respectively, is the scheduled monument site (1003557) known as Palaeolithic Sites near Baker's Hole. Located west of the High-Speed train line near to Ebbsfleet station. Little detail is actually provided on the Heritage England listing site as it was one of the earliest Schedule sites. Its importance is due to the Palaeolithic evidence of handaxes and environmental remains as well as mammalian fossils. The area around was excavated in 1997 ahead of the High Steep line and stations at Ebbsfleet.

5.1.9 Circa 950m to the east at Northfleet, there was a roman Villa. A settlement was located at Springhead. Circa 2km to the south east of Swanscombe. In addition, a Saxon water mill from 700 AD as well as an early Saxon cemetery was found. Therefore, the area east of the three PDAs in Swanscombe had had archaeological remains of national importance.

5.2 Area Archaeological and Historical Narrative

Dartford

5.2.1 The name Dartford originates from this place having a ford that crossed the River Darent. Written as Tarenteford in 1086 AD, it is shown as Darenteford in 1089 before becoming Dartfoorde by 1610 AD. The River Darent is recorded as Diorente as early as 822 AD and is derived from the name Derventio, meaning a river where oaks are plentiful.

5.2.2 The Darent flows from springs south of westerham in a northward direction where it joins the Thames estuary north of Dartford. The upper reaches are tidal.

5.2.3 Palaeolithic evidence is normally found in River Valleys such as The Stour, The Medway and the River Darent is no exception. Dating to around 400,000 years, finds are normally handaxes and in the general region around the PDA evidence has been located at the west and north west.

5.2.4 Neolithic evidence is usually in the form of worked flints and little by way of occupation has been found in the area.

5.2.5 Little evidence relating to the Bronze Age has been found other than a hoard near Watling Street and possibly a late Bronze Age/Early Iron Age settlement at Temple Hill, north of Watling Street.

5.2.6 Evidence for the Iron Age in Dartford has been found in the area of Watling street as pottery or ditches. Burials sites have been located in the area of Dartford Hospital. At Temple Hill, it is possible that the settlement there continues into this period.

5.2.7 Roman. Dartford in Roman times was considered to be a major fording place on Watling Street, the main Roman road from London to Dover and ran through Dartford along East Hill, the High Street and Spital Street, some 1.5km north of the PDA. East Hill has a Roman cemetery that was in use from the early to mi-second century until the fourth century. The site contained 150 graves that followed an east-west alignment. A Roman hill top shrine was located at Temple Hill, along with nearby early inhumations.

5.2.8 The River Darent was important in the Roman period as testified by the number of villas along its length. There is one at Dartford between Darenth Road and the river. One within the assessment area called the Wilmington Roman Villa that was original discovered in 1886 and excavated in 1975 with evidence continuing beyond the area of excavation. Unlike the other villas in the Darent Valley, it was interpreted at Wilmington, that the villa was the centre of a farming estate with many buildings identified in relation to farming. Part of the Roman field system around the villa has also been identified. The main villa itself is thought to lie under Hawley Road. North of the Wilmington Villa site in Lowfield Street, remains of a cut water channel was discovered and thought, along with gullies and ditches, suggesting a nearby settlement and may well be related to the Wilmington villa. Further up the valley is Lullingstone, that started as a faring villa and altered into a luxury villa site and further south is Darenth Roman Villa, again part of an agricultural estate.

5.2.9 In the Saxon period, east Kent was and area separate to that of West Kent divided by the Medway. The Dartford estate was held in the King's hands until the 10th century and is considered one of the earliest post Roman towns in Kent. The area of Temple Hill in the Saxon period was held by Eadric, the grandson of Athelstan

and mentioned in a charter is 995 AD and is likely to have been a market town and was probably a sizable trading and economic centre as well as an ecclesiastical centre. It appears that the importance of the Temple Hill area continued into the Saxon period with an early Anglo-Saxon cemetery that contained 51 burials confirming continued use of the area.

5.2.10 Dartford at the time of the Domesday Book is recorded as having 156 households, which is considered very large for the period. Of the households, 142 were villagers, 10 were smallholders, with 3 slaves and one reeve. Reeves were normally mentioned in the Domesday Book in relation to royal business. This suggests that in the Anglo-Saxon period, Dartford was already a well-established Saxon royal estate. There was enough land for 40 plough teams, as well as 22 acres of meadow, 40 acres of pasture with 11 woodland pig pastures, one mill and one church and three chapels. King Edward was the owner.

5.2.11 A ferry crossed the River Darent at Dartford from the 13th until the 16th century. A bridge was built in the early 15th century, which survived until the early 18th century. By this time, Dartford is part of the main road towards the continents and also on the pilgrimage route to Canterbury. As such, the town developed into a market town. The town also housed a priory consisting to Dominican nuns along with hospitals. A valuation of the town in 1301 provides documentary evidence of 218 people owning property and it is estimated that the total population in this period was between 800 to 1,000 people, which suggests that Dartford was larger than the average town. The town would have relied on the area outside to the town to support the population with food with orchards fields and market gardens. Trade would have also been important with the town utilising the Thames with a number of wharves.

5.2.12 The reformation would have impacted the town with the lack of pilgrimages and the dissolution of the priory. However, Henry VIII decided to build a manor house in the town.

5.2.13 The area attracted a number of industrialists. A large number of mills operated along the length of the Darent. These include paper mills, gunpowder mills, iron and brass mills, cotton mill, smelting works and normal corn and flour mills. The closest to the PDA, to the north east is that of the Dartford Powder Mills, which is

believed to have been operating since the 1730s, possibly on the site of an earlier papermill. Vickers also opened an ammunition factory in the town. By the later 18th century, the population would have increased to approximately 2500 people.

5.2.14 In the modern period, the town grew significantly, reaching approximately 80,000 people and many new housing estates were built to house the workers. Many historical buildings were lost through bombing and modernisation meaning that there is very little historical core to the town. Industry has since declined, with the loss of many of the mills. The area to the east and north east of the PDA being on the outskirts of the residential parts of Dartford has become the industrial area, with various industrial estates between the PDA and the river.

Swanscombe

5.2.15 Swanscombe was 'swanes camp' in old English and is thought to relate to a meaning of Peasant's field or the old English for Swan field. Alternative speelings include Suanescamp in 695 AD, Svinescamp in 1086 AD, changing to Swanescombe in 1292 AD and settling on Swanscomb by 1610 AD.

5.2.16 Swanscombe has been occupied since Palaeolithic times, flint tools from circa 400,000 years ago have been found. Many finds are located in ancient river gravels. Quarrying in the area has led to separate discoveries of rare Palaeolithic skull remains in 1935, 1936 and 1955 of three pieces of skull of Homo heidelbergensis, a different species of human to ourselves. Evidence from this period also includes much flora and fauna including elephants, aurachs, wolves and rhinoceroses. Banfield pit to the north of PDA 3 was declared a National Nature Reserve in 1954. Neolithic evidence is usually in the form of worked flints and little by way of occupation has been found in the area.

5.2.17 Iron Age activity was concentrated around the springs at Springhead to the south east of Swanscombe and the area associated with a ritual landscape. There was a 500m 'processional way' from the river edge to the high point overlooking the springs and many votive offerings in the form of coins were found. It was perhaps a continuation from this period of the area's religious significance that attracted the Romans.

5.2.18 In Roman times circa 2km to the south east of Swanscombe was the Roman town called Vagniaci since 56 AD, situated at the source of the river Ebbsfleet and the river was used to link Watling Street to the River Thames. It was a posting station and an important religious centre based on the springs with a sanctuary complex including a temple, ritual shaft in an area enclosed by a ditch. A large number of coins and brooches were found suggesting these were votive offerings. As well as residential properties, industry was also seen with an aisled barn, blacksmith forge, a baking, a possible brewing complex and crop dryers. At Pepperhill there was a major Roman cemetery with circa 600 burials. It was the Romans that first began to dig chalk from the area. Roman tiles have also been found in the fabric of St Peter and St Paul's church in Swanscombe. Roman tile kilns have been uncovered at Galley Hill and pottery-making remains have been discovered on Swanscombe Marshes.

5.2.19 The original Anglo-Saxon name for the section of the route between Canterbury and London was Casingc Stræt or Key Street, a name still borne by a hamlet on the road near Sittingbourne. This section only later became considered part of Watling Street. The Roman town did not develop into an English settlement. Watling Street passes circa 1km south of PDA 2.

5.2.20 There was a settlement in Swanscombe in Saxion times. The church also has Saxon origins and the place became part of the of Sutton-at-Hone within the Hundred of Axstane. At the end of the Saxon period, Swanscombe was larger in acreage and population and worth more in taxation than Northfleet, Southfleet and Stone. It is likely that the area was raided by the Vikings.

5.2.21 By the time of the Domesday Book, in 1086 AD, the town had 47 households which was considered very large. There were 14 plough teams, 40 acres of meadow, woodland for three pigs as well as 6 fisheries. The owner was Bishop Odo of Bayeaux. At the edge of Swanscombe Woods, the Normans built a motte and bailey castle as well as updating the Saxon church.

5.2.22 Swanscombe in the Medieval period has an agricultural focus with many smaller manors in the area around. The main manor was Swanscombe manor, which was next to the church. Nearby Greenhithe, north west of Swanscombe was a ferry

crossing point for the Thames and had wharves for the transportation of commodities.

5.2.23 Hasted, an historian in 1797, describes the "tolerable good land" and various major houses of the village. However, he also mentioned Swanscombe as being "exceeding unhealthy" due to the woods that "stop the current of air, and occasion the fogs and noisome vapours arising from the marshes to hang among them (the woods) and then descend on the village and lowlands again."

5.2.24 By the 18th century the manor house next to the church had reduced to that of a farmhouse. By the Victorian period, Swanscombe had industrialised with cement workings and gravel extraction. In 1801 the population was just 763 reaching 6,975 by 1901. James Frost founded a cement factory on a site at the edge of the marshes at Galley Hill in 1825. As well as the factory, the works included clay and chalk pits. By 1840, the area at Galley Hill developed with housing. By the 1850s the northern part of the High Street had developed. The southern part of Swanscombe remained rural. In 1868, Swanscombe Manor and its lands were sold and subsequently excavated for chalk and clay. The area around the High Street continued to expand for housing in the latter half of the 19th century. The area opposite the church developed from the 1870s and by the end of the 19th century, Swanscombe was no longer considered rural. Nearby other cement works started in Greenhithe, Stone and Northfleet. Paper manufacturing also took off at Northfleet. The area around Swanscombe became quite industrialised.

5.2.25 The recreation ground next to PDA 1, was opened in 1932 to create open space including football ground, tennis courts, bandstand, boating pond and a bowling green. During the Second World War, Swanscombe due to its industry and location was hit several times by bombs. In the 1960s, the old Manor House was demolished and the area turned into a park. In the late 1960s, the estate around Keary Road had been built. In the 1970s the final old houses in Milton Road were demolished and replaced.

5.2.26 At the Barnfield Pit, quarrying on a large scale ceased in the late 1930s, although sand continued to be taken in small quantities up until the 1950s. In 1954, the site was given to the Nature Conservancy to become a National Nature Reserve

and was also designated as a geological Site of Special; Scientific Interest (SSSI). From the mid-20th century quarrying in general in the area was in decline.

6 PDA 1, MILTON ROAD, SWANSCOMBE – ARCHAEOLOGICAL AND HISTORICAL NARRATIVE

6.1 PDA 1 Archaeological Narrative

Designated Heritage Assets

6.1.1 One of the tasks is to identify any designated heritage assets within the wider context of the PDA in accordance with The Setting of Heritage Assets – English Heritage Guidance (English Heritage 2011).

6.1.2 This guidance states that "setting embraces all of the surroundings (land, sea, structures, features and skyline) from which the heritage asset can be experienced or that can be experienced from or with the asset" (The Setting of Heritage Assets, English Heritage 2011).

6.1.3 There is just one listed building within the assessment area for PDA 1 being that of the Grade II* listed church of All Saints located at the far north eastern edge of the 500m radius assessment area that was built in the new High Street area of Swanscombe in the Victorian period. In addition, there are various non-designated heritage assets. Three are pillar boxes. Three relate to the Second World War as air raid shelter or a mortuary chapel. Another is the Methodist Chapel and the final building record is a milestone. and three building records within the assessment area. Post Medieval or modern in date (although the church does have Anglo-Saxon origins) and given the urban nature of the area, none of the assets have any intervisibility with the PDA. Therefore, the proposed development will not impact upon these designated and undesignated assets.

Table 2: Designated Heritage Assets

TQ 67 SW 85	Post Medieval to Modern	Church of All Saints. Grade II* listed (185781). 1894 R Norman Shaw Architect. Gothic style. Built of knapped flint with stone dressings.

0-100m Radius

6.1.4 There are two KHER entries for this area from the PDA. A Post Medieval farmstead record for a farmstead north east of Wilmington House (MKE 83786), where only the farmhouse remains. There is also a monument record for an anti-aircraft site for the Second World War circa 75m east of the PDA that was located to support the Vickers munitions factory (TQ 57 SW 345).

100-200m Radius

6.1.5 There are two KHER entries for this area from the PDA. A Second World War air raid warden's post was located at the north side of Milton Road and was circa 30m from PDA 1 (TQ 67 SW 584). The site is now covered by housing. Circa 70m to the south, south east is the site of a Baptist Chapel (TQ 67 SW 111) that opened in 1901 and was gone by 1960.

200-300m Radius

6.1.6 There are two KHER entries for this area from the PDA. One being a George VI pillar box circa 200m south west of the PDA (TQ 67 SW 499). The other is circa 180m north west of the PDA being the location of 16 Palaeolithic handaxes from the east side of what was New Craylands Pit between 1911-1913 (TQ 67 SW 34). By the end of the 20th century, this part of the pit had been replaced by housing.

300-400m Radius

6.1.7 There are nine KHER records for this area. Three relate to Palaeolithic finds. To the north east in an area of what were the various galley Hill pits an extraordinarily large number of handaxes, flake tools and unworked debitage was been found within Boyn Hill terrace deposits (TQ 67 SW 433), very little can be attributed to specific locations. Also, in the same area is the location of more flints from the 19th collection (TQ 67 SW 1434). To the south east of PDA 1 from the general Swanscombe area are significantly more handaxes totalling 1400, 61 cores, 220 flakes tools and 670 pieces of flint debitage that were collected in the 19th century (TQ 67 SW 1436), again specific locations are not known.

6.1.8 To the north of the PDA is the 1849 north Kent railway line (TQ 57 SE 277). To the east at the far end of Milton Road is a non-designated asset of a Methodist Chapel, which opened in 1888 and is still in active use (TQ 67 SW 109). There are four

records relating to the Second World War where three are air raid shelters (TQ 67 SW 581; TQ 57 SE 315; TQ 67 SW 576) and also an air raid warden's post at the Alma Public House (TQ 67 SW 569).

400-500m Radius

6.1.9 There are 34 KHER records for this area. All relating to prehistory or the Post Medieval period onwards. The Palaeolithic finds, predominately handaxes are mainly to the north west and north east of PDA 1. A number have been reported under the Portable Antiquities Scheme (PAS) and were recent chance finds (MKE 7956; MKE7957; MKE7958; MKE 7959) or during recent housebuilding in the area of the old quarries (TQ 67 SW 1430). Those found in the north east are in the area of Galley Hill, mainly in antiquity (TQ 67 SW 455; TQ 67 SW 454; TQ 67 SW 452; TQ 67 SW 1431). More handaxes have been found to the south, south east in the vicinity of the church of St Peter and St Paul.

6.1.10 To the west, Mesolithic flint implements have been found (TQ 57 SE 85). Moving into the Neolithic period in the area of Galley Hill to the north east was the location of the skeleton known as the Galley Hill Man found in 1888 (TQ 67 SW 41) interred in Pleistocene gravels, attributed to either the Neolithic or Bronze Age. The same area also had a Neolithic axe (TQ 67 SW 69). In the same Galley Hill area, a Roman pottery kiln was discovered in 1904, 5 feet below ground (TQ 67 SW 43). A chance find of a Medieval copper alloy seal matrix reported under the PAS was discovered to the north west (MKE58021) and a Post Medieval coin was also reported under PAS for the same area (MKE 58028).

6.1.11 The five records that related to the Post Medieval period relate to the Victorian growth of Swanscombe and include a church (TQ 67 SW 85), chapel (TQ 67 SW 101) tramways (TQ 67 SW 433) and milestone on the London Road (TQ 67 SW 1352). In addition, there were tram rails seen in the Barnfield Pit/ Craylands Gorge (TQ 94 SW 149).

6.2 PDA 1 Cartographic Sources and Map Regression

Andrews, Dury and Herbert map of 1769

6.2.1 Andrews, Dury and Herbert published their atlas some thirty years before the Ordnance Survey, immediately becoming the best large-scale maps of the county. This shows PDA 1 to the north east of a small hamlet labelled Milton Street. The centre of old Swanscombe around the church with the manor house is to the south, south east. In between the PDA and Swanscombe is a small water course (Fig. 2).

Hasted, 1798

6.2.2 The area of the PDA is still unpopulated and the locations of roads, villages and houses not dissimilar to the map above (Fig. 3).

Ordnance Surveyors Drawings 1797

6.2.3 The maps from this series shows the individual buildings and field boundaries. The PDA is part of an area that has a network of fields and the area is extremely rural. The area to the north east is referred to Galley Hill (Fig. 4).

Tithe Map from 1841

6.2.4 The tithe shows the majority of the PDA as part of field 330, which is called Long Field and owned by Charles Bayley and occupied by Thomas Hassell who farmed a number of fields in the area being a mixture of wood, arable, orchards, plantations and hops. Swanscombe and Milton Street are still separate settlement areas. Along the London Road to the north in the area of Galley Hill, there are now a small group of buildings being some 15 years after the opening of the first cement works (Fig. 5).

Historic OS Map 1872

6.2.5 This is the first properly scaled OS map. The PDA is still a field. The railway can be seen to the north that opened in 1849. The area is still predominately rural. A long-shaped building can be seen for the first time at the eastern end of Milton Road. (Fig. 6).

Historic OS map 1898

6.2.6 There have been significant changes. The site of the PDA is located within an area called the ‘old gravel pit’. Aside this to the west and north east are the terraced

houses of Broomfield Road. The eastern boundary of the PDA is a footpath that passes from Milton Road, along the rear of the garden of the south eastern houses in Broomfield Road that hears north east towards the High Street of Swanscombe. There are also more terraced houses located along the northern side of Milton Road. However, east of the PDA is a small orchard before housing. The houses along Galley Hill have extended southwards and now join up with the area of old Swanscombe. West of the PDA on the western side of Craylands Lane are large chalk and gravel pits. East of the PDA on the eastern side of Southfleet Road are more chalk and gravel pits (Fig.7).

Historic OS map 1908

6.2.7 The PDA appears unchanged. However, more houses have been built on the northern side of Milton Road reducing the size of the orchard to the east. In addition, houses are now being built on the southern side of Milton Road, including a Baptist Chapel. (Fig.8).

Historic OS map 1923

6.2.8 There appears to be no changes (Fig.9).

Historic OS map 1946

6.2.9 There have been significant changes. The area of the PDA previously labelled the old Gravel Pit is no longer labelled as such and the contours suggested the land levels have altered and been remodelled. The area has not been built on and has remained and open space. The map also refers to an area north of Broomfield Road and the open ground as Old Chalk pits as well and it is possible that this area was related to that pit as the tramway in that pit abuts the footpath. The area south of Milton Road is now completely filled with housing. The pits to the west and east are referred to a 'Old chalk Pits' suggesting they are no longer in use. The map also refers to an area north of Broomfield Road and the open ground as Old Chalk pits as well (Fig.10).

6.3 PDA 1 Aerial Photographs

1940s

6.3.1 The PDA is shown as part of the south east corner of a large disused pit area. It is bordered on the west and east by houses. The far north is still a deep disused pit as it the area to the far west and east (Plate 1).

1960s

6.3.2 The area of the pit at the PDA has been remodelled flat and it is possible that this may have been a landfill site. The other pits are also being altered. (Plate 2).

1990

6.3.3 Immediately south of the PDA on the northern side of Milton Road are new residential properties. The area of the pit is now a recreation ground. The PDA itself is an area of car parking and some garages at the rear of the new houses on Milton Road. The line of the footpath along the western side travelling north west has been maintained (Plate 3).

2007

6.3.4 The PDA is unchanged. The pit to the far north has been replaced by a housing estate. There has been further development on the western side of Crayland Lane of a school and leisure centre (Plate 4).

2018

6.3.5 There is no change to the PDA (Plate 5).

7 PDA 2, KEARY ROAD, SWANSCOMBE – ARCHAEOLOGICAL AND HISTORICAL NARRATIVE

7.1 PDA 2 Archaeological Narrative

Designated Heritage Assets

7.1.1 There are two Listed Building records and three non-designated building records within the assessment area. The listed building records include the Grade I listed church of St Peter and Paul in the old part of Swanscombe that has Anglo-Saxon origins although due to fire damage much of the church is early 20th century. Alongside the church are also listed (Grade II) the Victorian walls, gates and gate piers. Both of these are circa 270m from the PDA and given the urbanisation of residential houses between the PDA and the church, there is no intervisibility. The three building records at 325m north, north west, 475m north, north east and 435m east of the PDA, include a mortuary chapel for the cemetery and two modern post boxes dating to the George V period. Again, there is no intervisibility with the PDA. Therefore, the proposed development will not impact upon the non-designated assets.

Table 3: Designated Heritage Assets

TQ 67 SW 36	Early Medieval or Anglo-Saxon to Modern	Church of St Peter and Paul, Swanscombe. Grade I listed (1085788). The Church of S.S. Peter & Paul, Swanscombe, severely damaged by fire in 1902. Rebuilt in the 12th and enlarged and extended in the 13th and 14th centuries, with internal additions in the 15th c. and later, the roof, and presumably the porch, is modern. Heavily restored by Jabez Bignall in 1872-3 and repaired by him after a fire in 1902.
TQ 67 SW 1184	Post Medieval	Churchyard wall, gates and gate piers to north of church of St Peter and ST Paul, fronting Swanscombe Street. Grade II listed (1101457). Circa 1870. Flint wall about 4 ft in height with courses of brickwork and hipped brick cap. Cemented base. Red brick integral pilasters at intervals. In the centre are 2 flint piers with pyramidal caps supporting a lamp bracket and iron gates. Included for group value

0-100m Radius

7.1.2 There are no KHER entries for this area from the PDA.

100-200m Radius

7.1.3 There are three KHER entries for this area from the PDA.

200-300m Radius

7.1.4 There are three KHER entries for this area from the PDA. Circa 170m north, north west was the site of a Second World War PoW camp (TQ 67 SW 484), which has since been demolished and replaced by a housing estate. There are two findspot records. Circa 195m east at the Swanscombe Community School a possible large herbivore fossil was found during excavations (TQ 67 SW 471). Excavations in 2006, circa 180m to the south west discovered undated undiagnostic burnt flint (TQ 67 SW 1007) in an area of modern disturbance.

300-400m Radius

7.1.5 There are nine KHER records for this area. Three of the record relate to the Lower Palaeolithic period and consists of finds in the area of Manor Farm, near the church for which little is known (TQ 67 SW 1429). More recently artefacts from the Palaeolithic have been found in the location of the Ebbsfleet Academy (TQ 67 SW 221), to the north east of the PDA. As well as flints, finds included mammal bones. In the area to the east, south east of Eastern Quarry, more handaxes and other flint artefacts as well as associated faunal remains were discovered in advance of the construction of residential housing (TQ 67 SW 245). Two records relating to the Roman period are to the east and north, north west of the PDA. Samian ware was found in the Victorian period near Swanscombe Manor (TQ 67 SW 57). More recently at the site of the Swanscombe Community School, evidence was seen of a Roman road on a north west to south east alignment, possible heading towards Watling Street further to the south (TQ 67 SW 325). This radius also includes the listed building of the Grade I church and the accompanying Grade II walls, gate and gate piers. Next to the church is the site of what was Swanscombe Manor which has been demolished but was the site of an 18th century building on earlier Medieval foundations (TQ 67 SW 175). The site is also recorded as a farmstead (MKE 84109), where only the oast survives.

400-500m Radius

7.1.6 There are 13 KHER records for this area. There are three further Lower Palaeolithic records broadly located to the SE and north east. Also, found during

the building of the Castle Hill estate in recent years and finds also include faunal remains as well as flints (TQ 67 SW 1438; TQ 67 SW 1439). Other finds were found at Ricksons Pit, which was open during the 1930-1950s but has since been backfilled and landscaped (TQ 67 SW 35). At the eastern Quarry, Neolithic surface flints were identified in a geophysical survey of the area (TQ 67 SW 244). In 1955, circa 410m to the east of the PDA, a Roman tile cist inhumation was discovered at the side of a chalk pit (TQ 67 SW 56). The Bronze Age is evidence form axes and a palstave thought to be from another pit called Baker's Hole and purchased back in 1912 (TQ 67 SW 174).

7.1.7 There are two Post Medieval records. One of a clay pits to the south east that was in existence in the 19th century and disused by the 1930s. It is recorded as it contains a tramway cutting that survives (TQ 67 SW 240). Circa 470m to the north, north east was the site of a Wesleyan Methodist Chapel, that now contains a Scout hut 9TQ 67 SW 101). There are five Modern records. Two are related to pillar boxes, with the others referencing the Second World War as Royal Observer Corps post (TQ 67 SW 183), a boating pond and emergency water supply (TQ 67 SW 575) and air raid shelters that were under the Park Road recreation ground (TQ 67 SW 576).

7.2 PDA 2 - Cartographic Sources and Map Regression

Andrews, Dury and Herbert map of 1769

7.2.1 The area of Keary Road is at the edge of woodland to the south east of old Swanscombe. There is a track that passes by to the west from Old Swanscombe, through the woods to the south (Fig. 2).

Hasted, 1798

7.2.2 The area is still sparsely populated and the locations of roads, villages and houses not dissimilar to the map above (Fig. 3).

Ordnance Surveyors Drawings 1797

7.2.3 The maps from this series shows the individual buildings and field boundaries. The PDA is part of a larger field. The wood can be seen immediately to the south west.

The track through the wood no longer showing as passing through but stopping at the edge (Fig. 4).

Tithe Map from 1841

7.2.4 The tithe shows the PDA as part of field 262, which is owned by The Honourable Augustus John Child Villiers (Trustees of) and occupied by William Russell. The field is called Maiden's Well and is arable. William Russell occupied a number of the surrounding fields which ranged from Wood, orchard, arable and pasture (Fig. 5).

Historic OS Map 1872

7.2.5 The field in which the PDA is located has been reduced in size. There is a footpath that crosses the field. Around is a mixture of arable, woodland called Swanscombe Park and orchards. To the south west is a small pit area (Fig. 6).

Historic OS map 1898

7.2.6 The area of the PDA is still fields. However, to the south east there is an area labelled as Old Clay pit and to the east is a quarry and an old chalk pit. The area on the north eastern end of Swanscombe Street on which old Swanscombe was situated is now beginning to fill with terraced housing. In the woodland to the south west is labelled 'Sweyn's Camp' (Fig.7).

Historic OS map 1908

7.2.7 The PDA is now part of an orchard (Fig.8).

Historic OS map 1923

7.2.8 There is no change at the PDA (Fig.9).

Historic OS map 1946

7.2.9 There is no change at the PDA. The area south of Swanscombe street is still rural surrounded by pits and quarries (Fig.10).

7.3 PDA 2 - Aerial Photographs

1940s

7.3.1 The PDA is part of an arable field. To the north west is still orchards. To the north east has been built a school. To the east is a housing estate on the western side of what is Betsham Road. To the north houses have also been built on the southern side of Swanscombe Road to the east of Manor Farm (Plate 1).

1960s

7.3.2 The PDA is part of a small field. The area to the north east is now part of the playing fields to the school. Immediately north of the PDA a new housing estate is being constructed and the layout of Keary Road can be seen. Immediately south is the line of a road or tramway that leads towards a large pit to the east. In the fields to the south of the PDA can be seen cropmarks of the old field boundaries (Plate 2).

1990

7.3.3 The housing estate is completed and the PDA is part of a car parking area between houses accessed from the west along a track at the rear of gardens. Immediately south of the PDA are allotments. The route of the old tramway is now wooded and no longer in use. To the north east the school has expanded with additional buildings (Plate 3).

2007

7.3.4 There is no change at the PDA. However south and west of the allotments the arable fields have been replaced by a large quarry. To the north east, some of the school buildings have been replaced. (Plate 4).

2018

7.3.5 There is no change to the PDA. More school buildings have been replaced. The large quarry to the south is now a housing estate (Plate 5).

8 PDA 3, GILBERT CLOSE SWANSCOMBE – ARCHAEOLOGICAL AND HISTORICAL NARRATIVE

8.1 PDA 3 Archaeological Narrative

Designated Heritage Assets

8.1.1 There are no Listed Building records within the assessment area and just one non-designated building record of a George VI pillar box to the south east.

0-100m Radius

8.1.2 There are three KHER entries for this area from the PDA. The Alkerden Lane allotments immediately east to the PDA are considered to be of Lower Palaeolithic potential being located next to an area that contains the full sequence of Palaeolithic deposits that is now the Swanscombe Skull Nature Reserve (TQ 657 SE 1003). Immediately north of the PDA is the nature reserve where the Palaeolithic skull was found (TQ 57 SE 219). The final record in this area is the George VI pillar box.

100-200m Radius

8.1.3 There are no KHER entries for this area from the PDA

200-300m Radius

8.1.4 There are seven KHER entries for this area from the PDA. Two of the entries relate to the Palaeolithic period. A handaxe was discovered at Alkerden Farm to the south (TQ 57 SE 221) and 60 handaxes found in the Great Pit off Milton Street in the late 19th century to the north, north west (TQ 57 SE 1089). To the north, are Mesolithic flint implements (TQ 57 SE 85) and evidence of the Bronze Age in the form of pottery was found circa 290m to the north, north west in Collyers Pit in the 1930s (TQ 57 SE 242). To the south west is Alkerden Farm, a Post Medieval farmstead that had buildings to three sides of the yard. It has since altered with significant loss of its original form. Also, of the Post Medieval period is a record relating to Barnfield Pit that opened in the late 19th century that supplied gravel and chalk to cement works to the north east. It was an extension to another pit known as Claylands Pit further to the north. Other pits also opened to the south

and these were linked by tramways in tunnels under the Alkerden Road (TQ 57 SE 150). A Modern record for a cast iron pipe that is to the north in the Swanscombe Reserve is in working order (TQ 57 SE 202).

300-400m Radius

8.1.5 There are 12 KHER records for this area. Seven of the records have been assigned to the same location circa 325m to the south east of the PDA. This point was the site of Manor Farm (TQ 67 SW 97). All the other records are unprovenanced and have been given to a grid square. This includes Roman Amphora from Galley Hill (TQ 67 SW 49), a Roman Bronze statue (TQ 67 SW 45) and a Roman brooch (TQ 67 SW 59). There are also three small Thames picks from the Mesolithic period, again with no provenance (TQ 67 SW 50). An Iron Age Stater found somewhere in Swanscombe (TQ 67 SW 51). The site of Ye Chantry, which was number 75 in the High Street is also located to a grid square (TQ 67 SW 96).

8.1.6 All but one of the five remaining records are all related to industrial works. A Post Medieval cast iron bridge located in the nature reserve to the west (TQ 57 SE 196), concrete tunnels in the same area (TQ 57 SE 197; TQ 57 SE 203), as well as tramways (TQ 94 SW 149). A Second World War slit trench was located 355m west, north west but little more is known (TQ 57 SE 351).

400-500m Radius

8.1.7 There are six KHER records for this area. New Craylands Lane pit circa 495m to the north contained Roman human and animal bones from a cavity 30ft deep (TQ 57 SE 68). On the outskirts of Greenhithe to the north, north west flints along with course pottery has been found within gravels and assigned to the Later Prehistoric period (TQ 57 SE 84). Another Post Medieval and Modern cast iron footbridge is to the north on the Barnfield Pit (TQ 57 SE 201; TQ 57 SE 166) respectively. One of the quarry tunnels in Craylands Lane was used as an air raid shelter in the Second World War (TQ 57 SE 315) and a searchlight battery was located in a sports field east of the Knockhall Road (TQ 57 SE 350).

8.2 PDA 3 - Cartographic Sources and Map Regression

Andrews, Dury and Herbert map of 1769

8.2.1 The PDA is located in an unpopulated area south west of the Milton Street Hamlet and west of old Swanscombe. It is located on the edge of a large wooded area (Fig. 2).

Hasted, 1798

8.2.2 The area is still sparsely populated and the locations of roads, villages and houses not dissimilar to the map above (Fig. 3).

Ordnance Surveyors Drawings 1797

8.2.3 The maps from this series shows the individual buildings and field boundaries. The PDA is part of a large irregular shaped field. To the south is the area of Alkerden Farm which is still wooded. The area around is rural (Fig. 4).

Tithe Map from 1843

8.2.4 The tithe shows the PDA as part of field 230 which is bisected by a footpath from the area of the farm towards Milton Street houses. The owner is the Reverend George Cecil Renouard (Glebe), the vicar at the church at the time and occupied by Thomas Hassell. The field is arable and called Brumsets. Thomas occupies a number of fields in the area consisting of hops, arable, wood, plantations, gardens and orchards (Fig.5).

Historic OS Map 1872

8.2.5 The PDA is located in the same large field a large field (Fig. 6).

Historic OS map 1898

8.2.6 The PDA is unchanged. To the north the fields are now orchards. And north of the orchards are gravel and chalk pits (Fig.7).

Historic OS map 1908

8.2.7 The PDA appears unchanged. The quarries tot eh north are larger (Fig.8).

Historic OS map 1923

8.2.8 There is no change (Fig.9).

Historic OS map 1946

8.2.9 The field immediately north of the PDA have reduced in size and the quarry has expanded southwards and to the south west. To the south around Alkerden Farm, there are also more quarries to the south and west. To the east of the PDA, Swanscombe has urbanised but the lower end of Milton Street is still fields (Fig.10).

8.3 PDA 3 - Aerial Photographs

1940s

8.3.1 This shows the PDA as part of a large field as allotments and dissected by a footpath. Immediately north of the field is the quarry (Plate 1).

1960s

8.3.2 The allotment area, west of the PDA has reduced, and to the east of the PDA the field has been replaced by housing of Childs Crescent (Plate 2).

1990

8.3.3 Gilbert Close has been built and the PDA is part of a parking and garage area at the northern end of the close. The quarry area to the north and far west has closed and is levelled and landscaped. Immediately to the west are still allotments (Plate 3).

2003

8.3.4 There is no change to the PDA. The old quarry area, the vegetation has matured. The allotment area to the west is surrounded by vegetation (Plate 4).

2018

8.3.5 There is no change (Plate 5).

8.4 Summary of Potential for PDA 1, 2 and 3

8.4.1 Given the closeness of the three PDAs around Swanscombe it is appropriate to considering the potential for them on a combined basis.

Palaeolithic

8.4.2 The Palaeolithic period represents the earliest phases of human activity in the British Isles, up to the end of the last Ice Age. The Kent HER has 36 records from this period within the assessment area reflecting an extraordinary number of finds from this period that has been identified from the late 19th century onwards right across Swanscombe. Many obtained from the quarries that surround Swanscombe and the PDAs including the national significance Swanscombe Skull from the Barnfield Pit, although many of the earlier finds are unprovenanced with their exact locations not known. The potential for finding remains that date to this period within the confines of the PDAs are considered **high**.

Mesolithic

8.4.3 The Mesolithic period reflects a society of hunter-gatherers active after the last Ice Age and it was likely that they would still have been using the area in this period. The Kent HER has two records from this period within the assessment area three small Thames picks to the south east of PDA 3 and general flint implements found in the Swanscombe area again found in the late 19th or early 20th century with little by way of provenance or exact locations. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low**.

Neolithic

8.4.4 The Neolithic period was the beginning of a sedentary lifestyle based on agriculture and animal husbandry. The Kent HER has four records from this period within the assessment area. One a polished axe from Galley Hill, north east of PDA 1, for which little is known. The other record is for surface finds from the area of Eastern Quarry, south of Swanscombe and circa 435m east, south east of PDA 2 during a recent geophysical survey. Attributed to the later prehistoric period are flint artefacts and course pottery to the north west of PDA 3 towards Greenhithe. To the north east of PDA 1 in the Galley Hill pit, human remains were found in the

late 19th century. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low/moderate**.

Bronze Age

8.4.5 The Bronze Age was a period of large migrations from the continent and more complex social developments on a domestic, industrial and ceremonial level. The Kent HER has two records from this period within the assessment area being a socketed axe and palstave from the area of Baker's Hole found in antiquity to the east of Swanscombe and the PDAs. At Barnfield/ Collyers Pit west of PDA 1 and north west of PDA 3, Bronze Age pottery was found in the 1930s. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low/moderate**.

Iron Age

8.4.6 The Iron Age is, by definition a period of established rural farming communities with extensive field systems and large 'urban' centres (the Iron Age 'Tribal capital' or civitas of the Cantiaci). The Kent HER has just one record from this period within the assessment area being a gold Stater found circa 325m to the south east of PDA 2 and very little other Iron Age activity has been found in the wider area other than at Springhead prior to the Roman town. The potential for finding remains that date to this period within the confines of the development site is considered **low**.

Romano-British

8.4.7 The Romano-British period is the term given to the Romanised culture of Britain under the rule of the Roman Empire, following the Claudian invasion in AD 43, Britain then formed part of the Roman Empire for nearly 400 years. The Kent HER has ten records from this period within the assessment area. Immediately next to PDA 2 at the Swanscombe Thameside Community School evidence of a Roman road, and ritual enclosure site which later became a Roman farmstead has been found and nearby a cist inhumation was also discovered in 1955. The church of St Peter and St Paul's contains some Roman fabric and Samian pottery has been found nearby. At the Barnfield pit to the west of PDA 1 and north of PDA 3, Roman pottery Along with human and animal bones were found in the early 20th century

located within chambers. There are a number of other Roman finds such as a brooch, a Graeco-Roman statue of Osiris and amphora that the exact location in Swanscombe is not known. The area of Galley Hill has also revealed a Roman pottery kiln suggesting that there is potential for there to be other Roman activity in an area north of the School site. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **moderate/high** (Fig. 17).

Anglo-Saxon

8.4.8 The Kent HER has no records from this period within the assessment area. Although the area of old Swanscombe around the church of St Peter and St Paul has Anglo-Saxon origins. The potential for finding remains that date to this period within the confines of the development site is considered **low**.

Medieval

8.4.9 The Kent HER has three records from this period within the assessment area. A chance find of seal matrix was found to the north west of PDA 1 although this is likely attributed to a grid square location rather than the exact location given it was reported under the Portable Antiquities Scheme. Next to the church of St Peter and St Paul, is the site of the Medieval manor house that was demolished in the 1960s. To the south west of PDA 2 was the location of Sewyn's Camp which could be a barrow or possible motte. Exact details unknown and the site has since been destroyed. All three PDAs in this period were outside of the settlement areas in Swanscombe. Therefore, the potential for finding remains that date to this period is considered **low**.

Post Medieval

8.4.10 The Kent HER has 26 records from this period within the assessment area which is unsurprising given that this period reflects the growth of Swanscombe in this period, not just urbanisation but also industrialisation. Map regression confirms that PDA is in an area that was quarried. PDA remained rural until Keary Road was built in the 1960s and PDA 3 was at the edge of the Banfield quarry in a rural area until Gilbert Close was built in 1960s. The possibility of chance finds from this period cannot be discounted but the potential for finding remains that date to this period within the confines of the development site is considered **low**.

Modern

8.4.11 KHER has 48 records dating to this period of which 32 are Second World War related in the form of posts, civil defence sites or air raid shelters. Other records refer to industrialisation of tunnels or tramway sites, along with a number of pillar boxes. We know from map regression that all three sites were used for parking in the 2th century. Therefore, the potential for finding remains dating to this period in the PDA is considered **low.**

Undated

8.4.12 There were two undated KHER records in the assessment area for PDA 2. At the Swanscombe Community School a possible large herbivore was found (TQ 67 SW 471) and in an area known as the Pan Handle, circa 180m south west, undated burnt flint was found in an excavation, which may be modern.

Overview

8.4.13 This desk-based assessment has considered the archaeological potential of the site but this potential can only be tested by fieldwork.

8.4.14 The desk-based assessment has considered the archaeological potential of the site. Archaeological investigations in the vicinity, map research, the historical environment record results and recent archaeological investigations have shown that the PDAs of sites 1,2 and 3 may contain archaeological sites and these can be summarised as:

	PDA 1	PDA 2	PDA 3
• Prehistoric:	**high**	**high**	**high**
• Iron Age:	**low**	**low**	**low**
• Roman:	**moderate**	**high**	**low**
• Anglo-Saxon:	**low**	**low**	**low**
• Medieval:	**low**	**low**	**low**
• Post-Medieval:	**low**	**low**	**low**
• Modern:	**low**	**low**	**low**

9 PDA 4, MEAD CRESCENT – ARCHAEOLOGICAL AND HISTORICAL NARRATIVE

9.1 PDA 4 Archaeological Narrative

Designated Heritage Assets

9.1.1 There are no Listed Building records within the assessment area. There are six non-designated building assets, all relating to modern post boxes from the period of George V and VI. There is no intervisibility and the proposed development will not impact upon these assets.

Previous Archaeological Works

9.1.2 There have been a number of previous archaeological works in the area and focus has been towards the area to the south east in the location of the Roman villa. Some key intrusive events are summarised in Table 4.

Table 4: Intrusive Events

Event ID	Name	Distance from PDA	Description
EKE12030	Evaluation at the 'Branches Out' site, Trafalgar Road	c. 450m SE	Two evaluation trenches in 2012 identified Neolithic Flint blade and Roman ditches.
EKE8191	Evaluation on land adjacent to Powdermill Lane & Hawley Road, Dartford.	c. 570m SE	Undertaken in 2001 identified a Roman field system as well as Neolithic flakes and blades as well as Paleo-environmental remains.
EKE9975	Evaluation at Oakfield Infant's and Junior's School, Dartford	c. 450m SSE	Fragments of Roman ceramic building material (CBM) and post Medieval CBM. Lower levels of burnt clay and fire cracked flint and bone.
EKE38753	Excavation at the end of Trafalgar Road, Wilmington	c.450m SE	Excavation in 1975 of the Wilmington Roman Villa.
	Excavation at Princes Road	c. 250m E	In 1997 Neolithic and Bronze Age flints and ditches and possible occupation into the early Iron Age

Landscape Characterisation

9.1.3 The PDA is a large area characterised by KCC Historic Landscape Characterisation of 'Post 1810 settlement (general)'. To the north of the PDA is the southern extent of the town of Dartford in 1810 (Fig. 25).

0-100m Radius

9.1.4 There are no KHER entries for this area from the PDA.

100-200m Radius

9.1.5 There is just one KHER entry for this area from the PDA being a pillar box located at 11 Mead Road (TQ 57 SW 310).

200-300m Radius

9.1.6 There are seven KHER entries for this area from the PDA. A Neolithic /Bronze age flint working site was located 280m east of PDA 4 (TQ 57 SW 229). Slightly further east at circa 295m from the PDA a Bronze Age site at Lowfield Street was evidenced by a pit, ditch and pottery and although not interpreted as an occupation site, it suggests that one is nearby (TQ 57 SW 216). At Lowfield Street, in the same area a Romano British channel and gully contained pottery, flint flakes and heated stones (TQ 57 SW 191). This area also revealed during excavations Medieval copper alloy buckle (TQ 57 SW 228). Circa 240m east, north east from PDA 4, a Roman coin was found by workman prior to 1957 (TQ 57 SW 43). There are two Modern records. Another pillar box (TQ 57 SW 312) and the site of a Second World War air raid shelter in Cedar Road (TQ 57 SW 400).

300-400m Radius

9.1.7 There are six KHER records for this area. Palaeolithic evidence in the form of a handaxes was seen at the junction of Oakfield Lane and Lowfield Street circa 380m south, south east from PDA 4 (TQ 57 SW 113) and further Palaeolithic evidence circa 340m to the north east at the site of the swimming baths in 1973 providing evidence of the river plane (TQ 57 SW 169). The same site also revealed Medieval and Post Medieval occupation. All the remaining records are Modern and are from the Second World War period of emergency water tanks, air raid shelters and mortuary.

400-500m Radius

9.1.8 There are 18 KHER records for this area. Near Oakfield school is a possible roman building (TQ 57 SW 174) some 400m south, south east of the PDA, that could also be prehistoric (TQ 57 SW 286). In the same area, near the Orange Tree Inn is the site of Wilmington Roman villa (TQ 57 SW 12). Also, close to the villa site, an excavation found Roman ditches (TQ 57 SW 331). Palaeolithic evidence in the form of handaxes were found in 1952 during the construction of Dartford Technical College circa 500m north, north west of the PDA at levels of circa 26-29m OD. Reported in 1924, to the south, south east, two Palaeolithic handaxes were discovered at the bottom of Church Hill in Wilmington (TQ 57 SW 78). Possible Iron age evidence at 3 Hawley Road during an evaluation identified some Iron Age finds (TQ 57 SW 280). It is possible that the nearby Roman villa site has pre-Roman activity (TQ 57 SW 280).

9.1.9 The modern period is represented by more pillar boxes and Second World War activity of air raid shelters. A possible dene hole was discovered to the north west of PDA4 in 2006 in a former quarry site (TQ 57 SW 420). To the north east Post Medieval activity of an area of grey ash and clinker along with ceramic building material was found (TQ 57 SW 259).

Undated

9.1.10 There is just one undated record of brick fragments circa 490m, east of the PDA of red and yellow stick bricks (TQ 57 SW 263).

9.2 PDA 4 - Cartographic Sources and Map Regression

Andrews, Dury and Herbert map of 1769

9.2.1 This shows the PDA in an unpopulated area to the south west of the town of Dartford. The village of Wilmington is to the south of the PDA. The course of the River Darent can been seen on a broadly north-south axis to the east of the PDA with a number of mills along its length (Fig. 11).

Hasted, 1798

9.2.2 The area is still sparsely populated and the locations of roads, villages and houses not dissimilar to the map above. This map suggests that the area east of the of the PDA is pasture (Fig. 12).

Ordnance Surveyors Drawings 1797

9.2.3 The maps from this series shows the individual buildings and field boundaries. The PDA is part of a larger field and the land immediately surrounding the PDA is rural. The field appears to have a single building on it. To the south east at the junction the road is labelled as a Turnpike at the junction of Lowfield Street and Hawley Road. To the north, north east there are a number of large buildings being the southern extent of the town (Fig. 13).

Tithe Map from 1841

9.2.4 The tithe shows the PDA as part of an arable field 393, which is called 12 acres and owned by Richard Leigh and occupied by George Whitlock as part of the Bugden House and Orange Tree Farm estate. There is little by way of housing along the road at this point. The field immediately north has Brickfield cottage and Brickmakers Huts and field 384 to the east is called Brick Earth Meadow and it likely to have been used for brickearth (Fig. 14).

Historic OS Map 1898

9.2.5 This is the first properly scaled OS map. The PDA is now located in a large field with some field boundaries having been removed. More buildings are now located along the Lowfield Road and this area east of the road is still rural (Fig. 15).

Historic OS map 1910

9.2.6 The PDA appears unchanged and this area is still rural. Most of the development is to the south east near Hawley Road. (Fig.16).

Historic OS map 1930

9.2.7 There have been significant changes. A new housing estate has been built and the PDA is situated in an area in the centre of houses along Mead Crescent, Elm Road and Ash Road. A matching area is to the south also off Mead Crescent. To the north is a newly constructed Princes Way (Fig.17).

Historic OS map 1938

9.2.8 The PDA is unchanged. More housing has been built to the north of Princes Way (Fig.18).

9.3 PDA 4 - Aerial Photographs

1940s

9.3.1 The picture is not clear but suggests along the western boundary is a long building with the rest of the area as courtyard of some sort. The matching area to the south appears to be grass (Plate 6).

1990

9.3.2 This shows a much smaller building on the western side (Plate 7).

2018

9.3.3 There is no change to the PDA other than it now looks unused (Plate 8).

9.4 PDA 4 - Summary of Potential

Palaeolithic

9.4.1 The Palaeolithic period represents the earliest phases of human activity in the British Isles, up to the end of the last Ice Age. The Kent HER has four records from this period within the assessment area. Two were located in the area to the south, south east of the PDA on what would be the western banks of the River terraces of gravel which were retrieved in antiquity from pits (TQ 57 SW 113; TQ 57 SW 78). One Palaeolithic record was to the north east and the other to the north, north west where 4 Palaeolithic handaxes were found 1952. It is possible BGS maps are not accurate and that the Boyn gravels may extend this far. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **moderate/high**.

Mesolithic

9.4.2 The Mesolithic period reflects a society of hunter-gatherers active after the last Ice Age. The Kent HER has no records from this period within the assessment area, nor does it seem there are any in the wider area. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low**.

Neolithic

9.4.3 The Neolithic period was the beginning of a sedentary lifestyle based on agriculture and animal husbandry. The Kent HER has two records from this period within the assessment area. Similar to the Palaeolithic finds area, the Neolithic can be found to the east and south east of the PDA and include flint working site, although this may fall into the Bronze Age period and a flint blade (TQ 57 SW 229; TQ 57 SW 330). Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low/moderate**.

Bronze Age

9.4.4 The Bronze Age was a period of large migrations from the continent and more complex social developments on a domestic, industrial and ceremonial level. The Kent HER has one record from this period within the assessment area being those of a site in Lowfield Street (TQ 57 SW 216). Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low**.

Iron Age

9.4.5 The Iron Age is, by definition a period of established rural farming communities with extensive field systems and large 'urban' centres (the Iron Age 'Tribal capital' or civitas of the Cantiaci). The Kent HER has just one record from this period within the assessment area. Being finds at 3 Hawley Road to the south that found pottery but no evidence of occupation, although it is not unusual for Iron Age sites to continue into the Roman period and the location is in the area around the Wilmington Roman villa. In Dartford the main concentration of Iron Age is around Temple Hill. The potential for finding remains that date to this period within the confines of the development site is considered **low**.

Romano-British

9.4.6 The Romano-British period is the term given to the Romanised culture of Britain under the rule of the Roman Empire, following the Claudian invasion in AD 43, Britain then formed part of the Roman Empire for nearly 400 years. The Kent HER has six records from this period within the assessment area. Wilmington Roman villa is to the south east of the PDA (TQ 57 SW 12) with evidence of the Roman field system just outside of the assessment area (TQ 57 SW 225). More of the field system to the west of the villa (TQ 57 SW 174) circa 400m from the PDA. When the villa was excavated in 1975, it was mentioned that activity continued outside of the confines of the excavation area. Nearby at the site of the Oakfield Junior School, possible prehistoric or Roman features of a pity and gully were found (TQ 57 SW 286) and also in broadly the same area to the south, south east of the PDA, a number of Roman ditches were found (TQ 57 SW 331). It is not clear how far the Roman activity extends from the area around the villa. The area east of the PDA also have Roman activity in the form of a channel and gully (TQ 57 SW 191) and a chance find of a coin (TQ 57 SW 43). Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **moderate**.

Anglo-Saxon

9.4.7 The Kent HER has no records from this period within the assessment area. Therefore, the potential for finding remains that date to this period within the confines of the development site is considered **low**.

Medieval

9.4.8 The Kent HER has just one record from this period within the assessment area being that of a copper alloy buckle found in an excavation to the east (TQ 57 SW 228). Map regression suggestion the area was rural in the Post Medieval period and this likely applies to the Medieval period too. Therefore, the potential for finding remains that date to this period is considered **low**.

Post Medieval

9.4.9 The Kent HER has just two records from this period within the assessment area over to the north east and north west of the PDA. One is CBM and the other a potential denehole. The area immediately to the east and north east suggests

activity in the area for brick making. The possibility of chance finds from this period cannot be discounted but the potential for finding remains that date to this period within the confines of the development site is considered **low**.

Modern

9.4.10 KHER has 14 records dating to this period reflecting the 20th century growth of Dartford as it expanded southwards. Many of the records relate to the Second World War and a number are also pillar boxes. The PDA was used as a council depot. Therefore, the potential for finding remains dating to this period in the PDA is considered **low.**

Overview

9.4.11 This desk-based assessment has considered the archaeological potential of the site but this potential can only be tested by fieldwork.

9.4.12 The desk-based assessment has considered the archaeological potential of the site. Archaeological investigations in the vicinity, map research, the historical environment record results and recent archaeological investigations have shown that the PDA may contain archaeological sites and these can be summarised as:

- Prehistoric: **moderate/high**
- Iron Age: **low**
- Roman: **moderate**
- Anglo-Saxon: **low**
- Medieval: **low**
- Post-Medieval: **low**
- Modern: **low**

10 IMPACT ASSESSMENT, ALL

10.1 Introduction

10.1.1 Cartographic Regression, Topographical Analysis, and Historic Research have provided evidence for the historic use of the site. By collating this information, we have assessed the impact on previous archaeological remains through the following method of categorisation:

- **Total Impact** - Where the area has undergone a destructive process to a depth that would in all probability have destroyed any archaeological remains e.g. construction, mining, quarrying, archaeological evaluations etc.

- **High Impact** – Where the ground level has been reduced to below natural geographical levels that would leave archaeological remains partly in situ either in plan or section e.g. the construction of roads, railways, buildings, strip foundations etc.

- **Medium Impact** – Where there has been low level or random disturbance of the ground that would result in the survival of archaeological remains in areas undisturbed e.g. the installation of services, pad-stone or piled foundations, temporary structures etc.

- **Low Impact** – Where the ground has been penetrated to a very low level e.g. farming, landscaping, slab foundation etc.

10.2 Historic Impacts

PDA 1

10.2.1 Cartographic regression (5.5), Topographic analysis (1.2) and Historical research (5.4) indicate that the PDA has been agricultural land until the late 19th century. Sometime between 1872 and 1898, the area of PDA became a gravel pit and was backfilled sometime by the mid-20th century. Any potential archaeology is likely to have been removed or severely disturbed as a result. Therefore, any impact on surviving archaeological remains is likely to have been **high/total**.

10.2.2 The proposed development will have a **high** impact. However, given that there is low archaeological potential at the location, this is not an issue.

PDA 2

10.2.3 Research indicated that this area remained rural until the 1960s when the Keary Road and houses were built. The PDA has been tarmacked and it is possible that there is undisturbed archaeology below. Therefore, the historical impact is considered to be **low**. The PDA is somewhat higher at 41m aOD that the area of the school to the east that had Roman and Palaeolithic remains that were circa 1-1.5m below the ground surface of circa 30m.

10.2.4 The proposed development requiring foundations will have a **high** impact.

PDA 3

10.2.5 Research confirms that the PDA at Gilbert Road was rural until the houses were built sometime between 1960s and 1990 and the site of the PDA became a tarmacked parking area. It is possible that undisturbed archaeology lies below. Therefore, the historical impact is considered to be low. The PDA is at a height of 36m aOD and the Palaeolithic Boyn Hill gravels immediately to the north are at a level of circa 32-34m OD.

10.2.6 The proposed development requiring foundations will have a **hi**gh impact.

PDA 4

10.2.7 Research confirm that the PDA was farmland until the 1930s when the estate around Mead Crescent was built. It is not clear as to the purpose of the PDA situated where it is surround by residential houses but in recent times it has been a council depot. It appears that on the western side there has been at least two different buildings and it is not certain how temporary of permanent these may have been and therefore the impact from any foundations to these is unclear but is likely to be **medium/high**. It is also unclear what impact the building of the surrounding houses would have had on the remainder of the PDA.

10.2.8 The proposed development requiring residential foundations will have a **high** impact.

11 SIGNIFICANCE

11.1 Introduction

11.1.1 Archaeological Significance is assessed under a number of criteria, which includes, Period, Rarity, Group Value, Survival/Condition, Fragility/Vulnerability, Diversity and Potential. These criteria are the same as used by the Government in the scheduling of ancient monuments and provide a useful framework in assessing significance and also pulls together and summarises the findings in the report.

11.2 Significance Criteria

Period

11.2.1 The main period of significance for both Swanscombe and Dartford is that of the Palaeolithic and Roman, through to the Post Medieval period, which represents the attractiveness of the Darent and Ebbsfleet river valleys for early occupation and later, industry.

Rarity

11.2.2 Prehistoric activity, particularly in the Palaeolithic period is rare. The Swanscombe skull just being one of two early human remains from this period in England. As a result, understanding the occupation and activity and exploitation of the Ebbsfleet river valley is a key research topic of national significance attested by the number of geotechnical samples in excavations in recent years in the area to understanding the geology and Palaeolithic potential and mapping the extent of the Boyn gravels in both Dartford and Swanscombe. An extremely large number of handaxes have been found in antiquity as a result of quarrying with very little detail. Hence any opportunity to undertake further Palaeolithic research is important. It is therefore recommended that a Palaeolithic DBA is carried out.

11.2.3 Important to understand the extent of the Boyn Hill deposits in the area of PDA 3 especially as there is uncertainty in how far they extend south from the Barnfield pit. The 2002 report by Francis Wenban-Smith suggests that further archaeological evaluation in the area around PDA 3 is required and is considered to be of significant significance to require investigation ahead of any development. Regarding the area around PDA 2 as having potential for undisturbed archaeological material and faunal remains, further research questions were posed as to further understanding the relationship of gravels and palaeo-landsurfaces. For PDA 4 it is important to accurately map the extent of any gravels on the western side of the Darent valley.

Documentation

11.2.4 The historical and landscape development of the PDA can be understood reasonably well from the cartographic, photographic and other sources from the Post Medieval period onwards.

Group Value

11.2.5 The potential for the Swanscombe PDAs as part of the wider Ebbsfleet valley and for Dartford PDA to have Palaeolithic remains has a high group value with the remains from this period found nearby already in both areas found representing the use of river valleys in this period. In addition, there is potential to further our understanding of the Roman land use in both areas.

Survival / Condition

11.2.6 The map regression confirms that the Swanscombe PDAs had been agricultural use until the late 19th century, when PDA 1 became a gravel pit. PDA 2 and 3 remained rural until the second half of the 20th century when houses were built and all three of the PDAs became car parks. The likelihood of potential archaeology surviving is low at PDA 1 but high at PDAs 2 and 3. At PDA part of the site is likely to have has medium/high impact form building foundations. The remainder of the site may have been impacted during the building of the houses around and their accompanying services.

Fragility / Vulnerability

11.2.7 In the area of foundations and service trenches relating to proposed developments will have a high impact on any potential surviving archaeology.

Diversity

11.2.8 There is considered to be diversity of the archaeology in the Swanscombe and Dartford area from the Prehistoric and Roman period. In addition, in Swanscombe there is the likelihood for remains from the Post Medieval period.

Potential

11.2.9 The overall archaeological potential is considered high for the Prehistoric period, with moderate/high for the Roman period and low for all other periods. However, the possibility of chance finds from any period cannot be discounted. Although the overall potential of finding archaeology in-situ is considered high for PDAs 2

and 3 and low for PDA 1. The potential of finding archaeology in-situ at PDA 4 is uncertain.

Significance

11.2.10 The Swanscombe PDAs are in an area of high national significance for the Palaeolithic period. Based on the information gained in this report, it can be concluded that PDA 1 is of low archaeological interest given the severe disturbance that is likely to have occurred at the site due to gravel extraction but high for PDAs 2 and 3 that are potentially undisturbed. The Dartford PDA is also in an area considered to have Palaeolithic remains of national importance and has a high archaeological interest although it is unclear if these survive.

12 ARCHAEOLOGICAL MITIGATION

12.1 Introduction

12.1.1 The purpose of this archaeological desk-based assessment was to provide an assessment of the contextual archaeological record in order to determine the potential survival of archaeological deposits that may be impacted upon during any proposed construction works.

12.1.2 The assessment has generally shown that the four areas to be developed are within areas of **high** archaeological potential for the prehistoric and moderate/high for the Roman period and low for all other periods. The overall potential for surviving archaeology is considered high for PDA 2 and 3, low for PDA 1 and uncertain for PDA 4. The impact of any proposed development will potential have a **high** impact on any potential surviving archaeology.

13 OTHER CONSIDERATIONS

13.1 Archive

13.1.1 Subject to any contractual requirements on confidentiality, two copies of this desk-based assessment will be submitted to the LPA and Kent County Council (Heritage) within 6 months of completion.

13.2 Reliability/Limitations of Sources

13.2.1 The sources that were used in this assessment were, in general, of high quality. The majority of the information provided herewith has been gained from either published texts or archaeological 'grey' literature held at Kent County Council, and therefore considered as being reliable.

13.3 Copyright

13.3.1 Swale & Thames Survey Company and the author shall retain full copyright on the commissioned report under the Copyright, Designs and Patents Act 1988. All rights are reserved, excepting that it hereby provides exclusive licence to Dartford Borough Council (and representatives) for the use of this document in all matters directly relating to the project.

Paul Wilkinson PhD MCIfA.

SWAT Archaeology

March 2019

14 REFERENCES

14.1 Bibliographic

Dartford Brough Council Core Strategy (2011)

Dartford Development Policies Plan (Adopted 2017)

Kent Design Guide

CIfA 2017 Standard and Guidance for historic environment desk-based assessment

National Planning Policy Framework 2018

Data provided by Kent HER

Hasted. 1789. The History and Topographical Survey of the County of Kent, Volume 2.

Glover, J. 1982. The Place Names of Kent.

English Heritage Guidance (2014) The setting of the Heritage Assets

Margary, I. D. 1973. Roman Roads in Britain. John Baker. London

Unpublished report: Wenban-Smith.2002. Eastern Quarry, Swanscombe: Preliminary Palaeolithic /Pleiocestocene Field Evaluation Report. Department of Archaeology, University of Southampton

Unpublished Document: Canterbury Archaeological Trust.1997. Swanscombe Thameside Community School: Archaeological Evaluation.

Unpublished Document: Wenban-Smith. 2001. Craylands Lane (west Primary School, Swanscombe Field Evaluation Report (Palaeolithic).

Unpublished Document: MOLA. 2010. A Romano-British Site at Swanscombe, Kent.

Unpublished Document: Oxford Archaeological Unit. 2001. Land adjacent to Powdermill Lane and Hawley Road, Dartford, Kent.

Unpublished Document: Wenban-Smith, F. 2001. Powdermill Lane, Dartford: Field Evaluation Report (Palaeolithic). Centre for the Archaeology of Human Origins, University of Southampton.

Unpublished document: Wessex Archaeology. 2015. Archaeological Evaluation and Palaeolithic Test Pit Report: Land at Powder Mill Road, Darenth, Kent

Unpublished document: Archaeology South-East. 2008. An Archaeological Evaluation at Oakfield Infant's and Junior's School, Dartford, Kent.

Everitt, A. 1986. Continuity and Colonization: The Evolution of Kentish Settlement.

Unpublished document: Canterbury Archaeological Trust. 2012. Archaeological Evaluation at the ‘Branches Out’ site, Trafalgar Road, Wilmington, Kent

14.2 Websites

Ancient Monuments and Archaeological Areas Act 1979. Available at: http://www.legislation.gov.uk/ukpga/1979/46.

Chartered Institute for Archaeologists, 2014. *Standards and guidance for historic environment desk-based assessment*. Available at: http://www.archaeologists.net/codes/ifa

Ministry of Housing, Communities and Local Government, 2018. *National Planning Policy Framework*. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

Historic England, 2008: *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment*. Available at: https://www.historicengland.org.uk/images-books/publications/conservation-principles-sustainable-management-historic-environment/

Planning (Listed Buildings and Conservation Areas) Act 1990. Available at: http://www.legislation.gov.uk/ukpga/1990/9/contents

Kent Design Guide. Available at: http://www.kent.gov.uk/about-the-council/strategies-and-policies/regeneration-policies/kent-design-guide

Portable Antiquities Scheme. Available at: http://www.finds.org.uk

British Geological Survey. Available at: http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

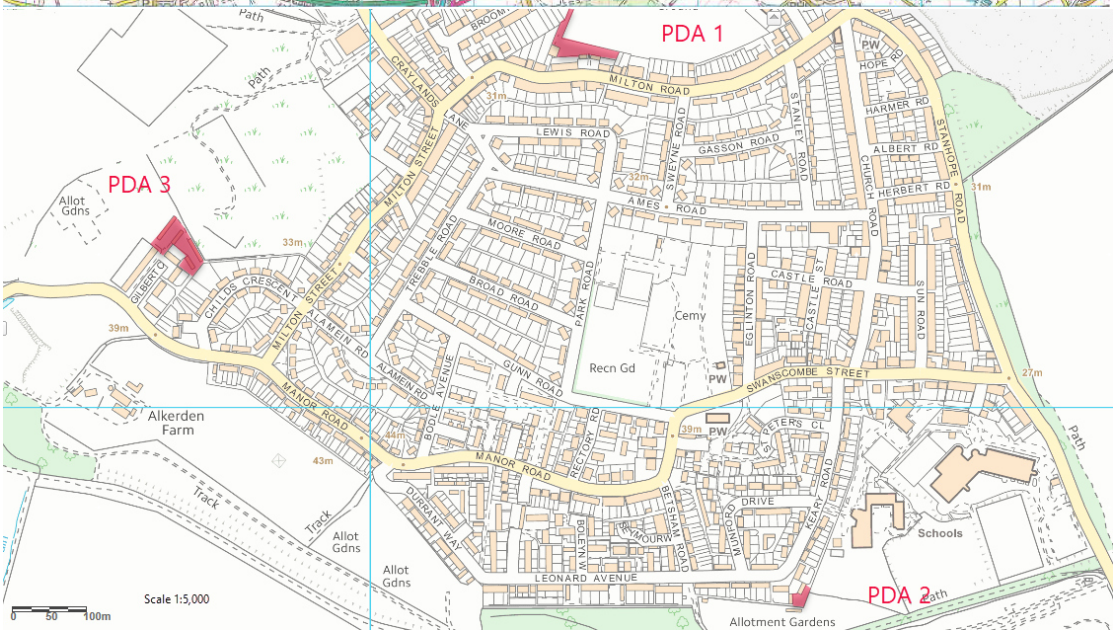
South East Research Framework. Available at: https://www.kent.gov.uk/leisure-and-community/history-and-heritage/south-east-research-framework

Dartford Borough Council Core Strategy (2011). Available at: https://windmz.dartford.gov.uk/media/Inspector%20Approved%20Core%20Strategy.pdf

Dartford Development Policies Plan (Adopted 2017). Available At: https://windmz.dartford.gov.uk/media/DP_Plan_Final_Version_for_Adoption_for_web.pdf

LONDON
Southend-on-Sea
SOUTHEND-ON-SEA
Thames Estuary
Isle of Sheppey
Margate
Ramsgate
Broadstairs
North Foreland
Canterbury
Dover
Folkestone
Ashford
Maidstone
Tunbridge Wells
Sevenoaks
Gravesend
Tilbury
Richmond
Croydon
Sutton
Dorking
Reigate
Crawley
Horsham
East Grinstead
Uckfield
Lewes
Hastings
Rye
Dungeness
Romney Marsh
Kent Downs
The Downs
South Foreland
STRAIT OF DOVER
SURREY
KENT
EAST SUSSEX
WEST SUSSEX
Scale 1:640,000

PDA1
PDA 3
PDA 4
PDA 2
DARTFORD
DARTFORD DISTRICT
Scale 1:40,000


PDA 1
PDA 3
PDA 2
MILTON ROAD
LEWIS ROAD
GASSON ROAD
SWANSCOMBE STREET
MANOR ROAD
CASTLE ROAD
Alkerden Farm
Allot Gdns
Recn Gd
Cemy
Schools
Allotment Gardens
LEONARD AVENUE
Scale 1:5,000

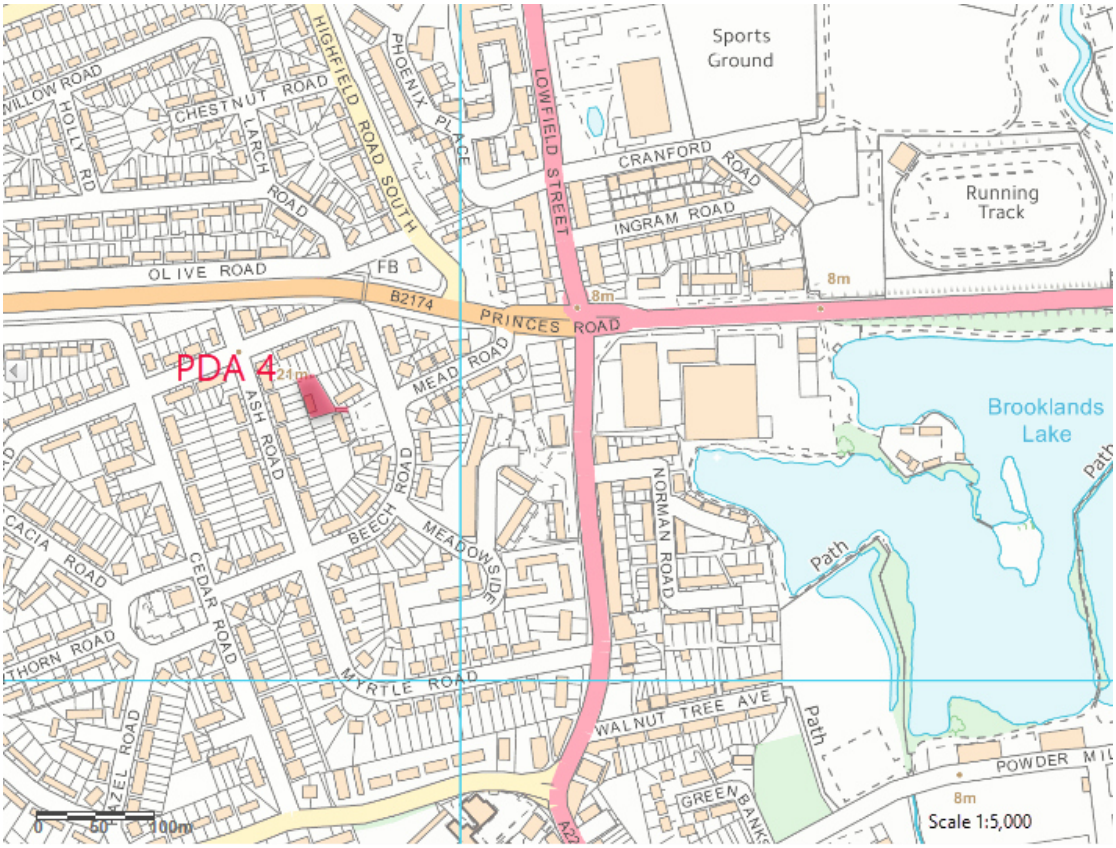


Figure 1: Location Maps

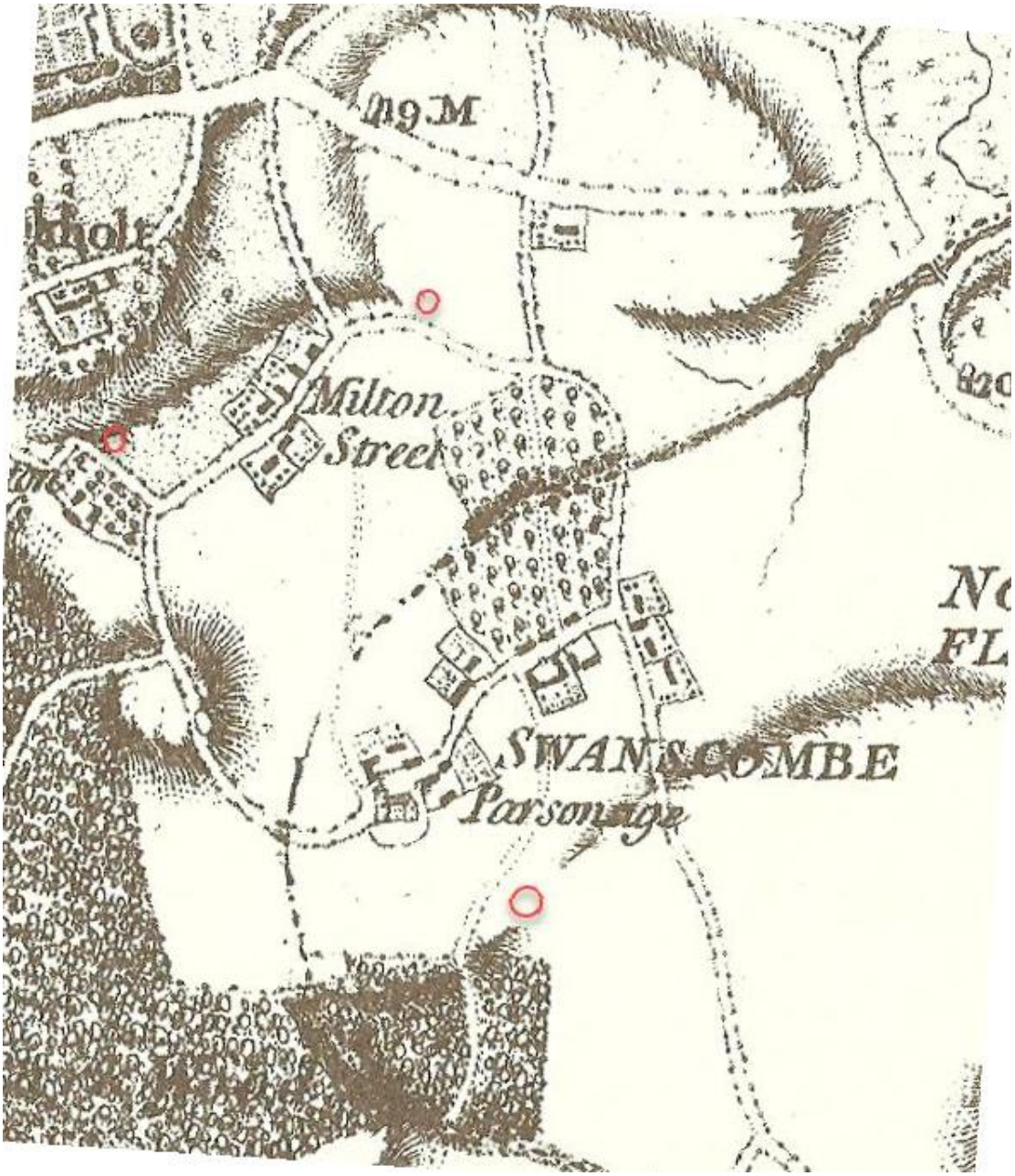


Figure 2: Andrew, Dury and Herbert Map from 1769, PDA 1, 2 and 3

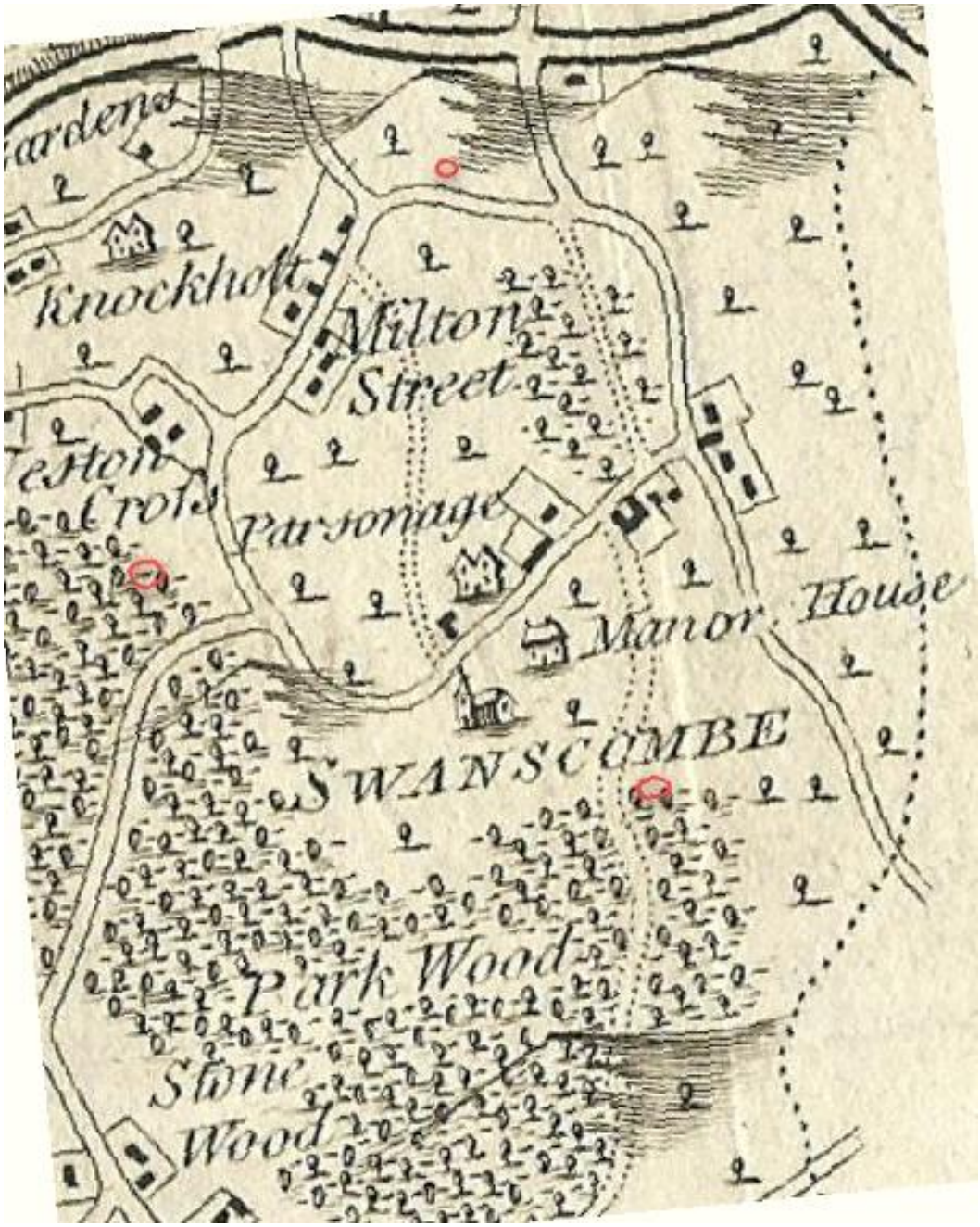


Figure 3: Hasted, 1798

Figure 4: Ordnance Surveyors Drawing, 1797, PDA 1, 2 and 3

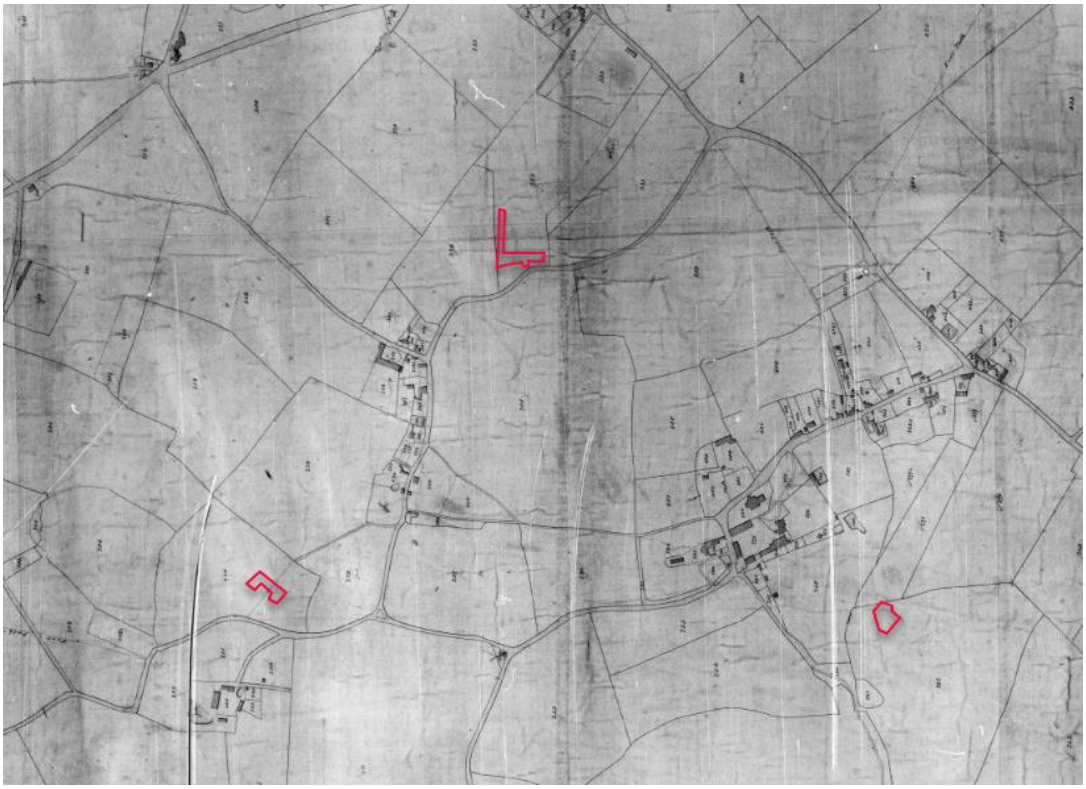


Figure 5: Swanscombe Tithe Map 1843

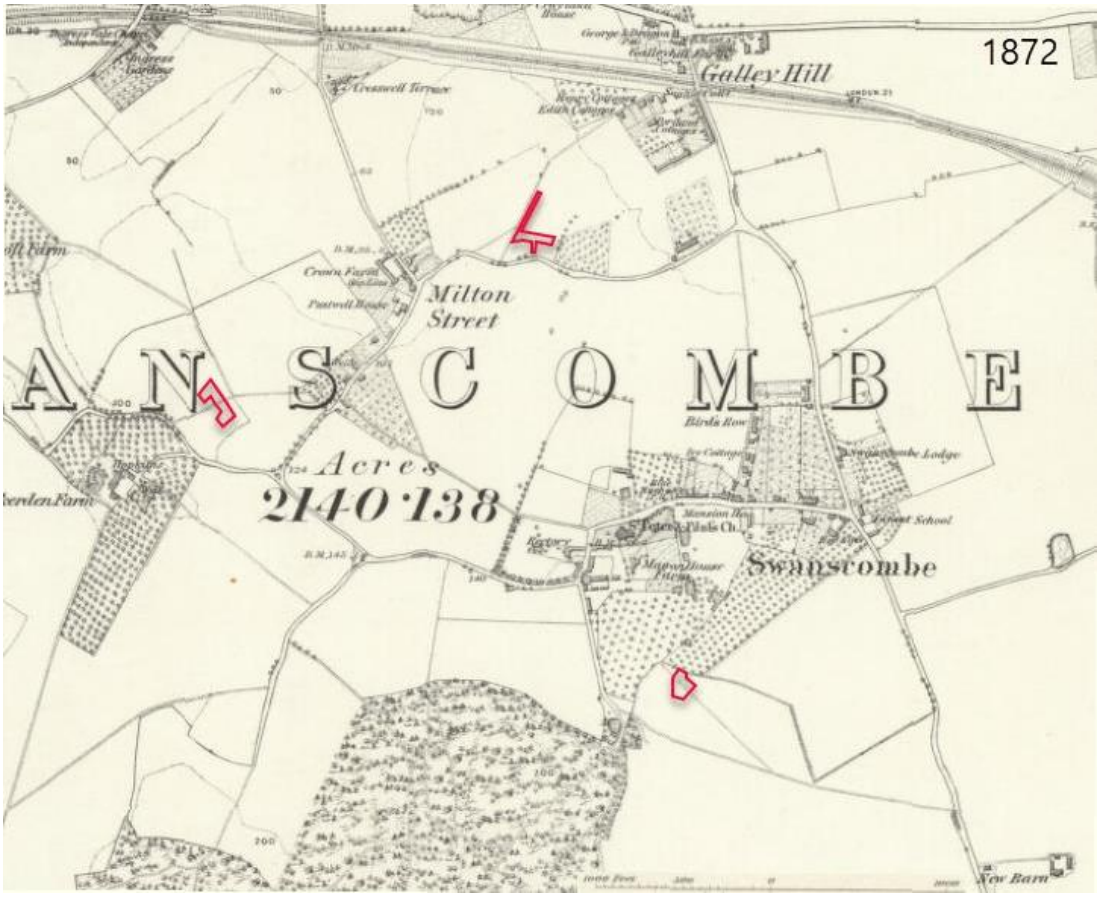


Figure 6: Historic OS Map 1872, PDA 1, 2 and 3

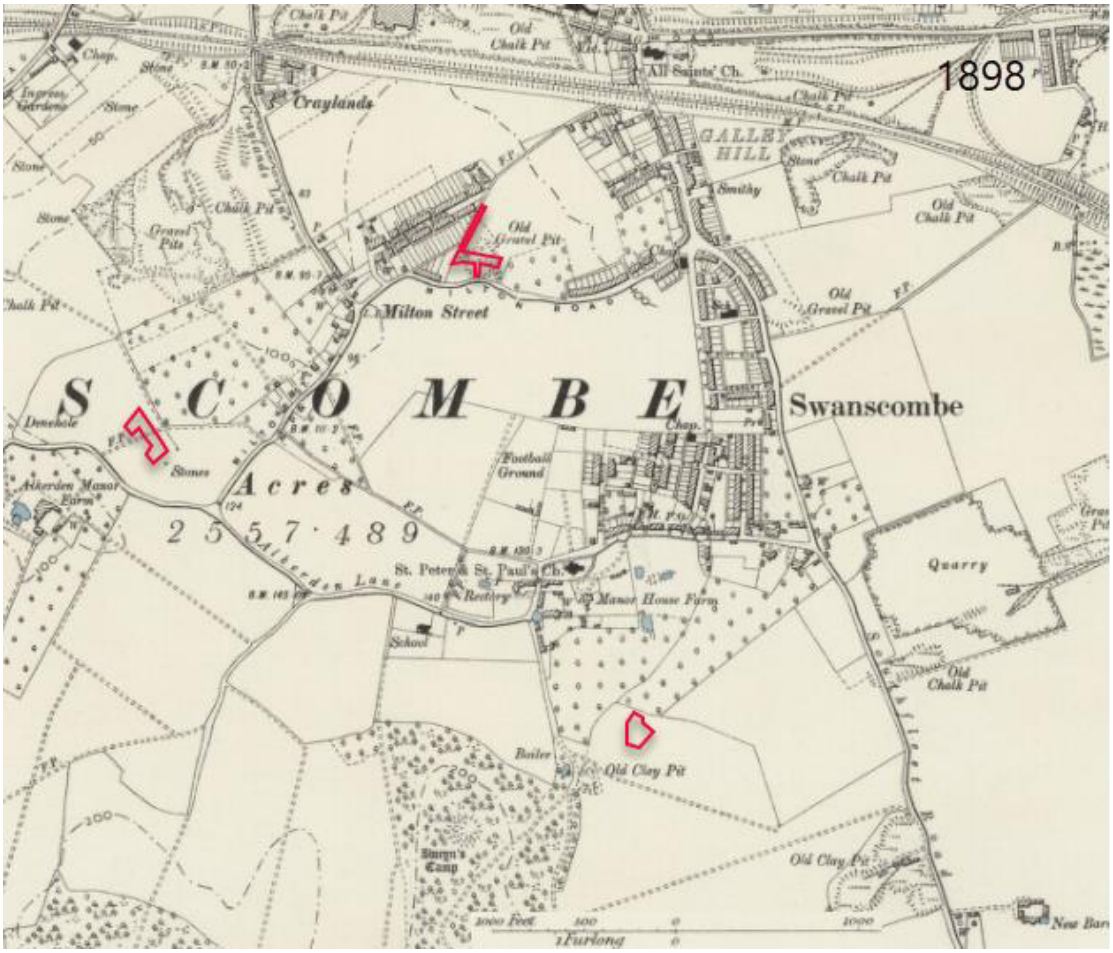


Figure 7: Historic OS Map from 1898, PDA 1, 2 and 3

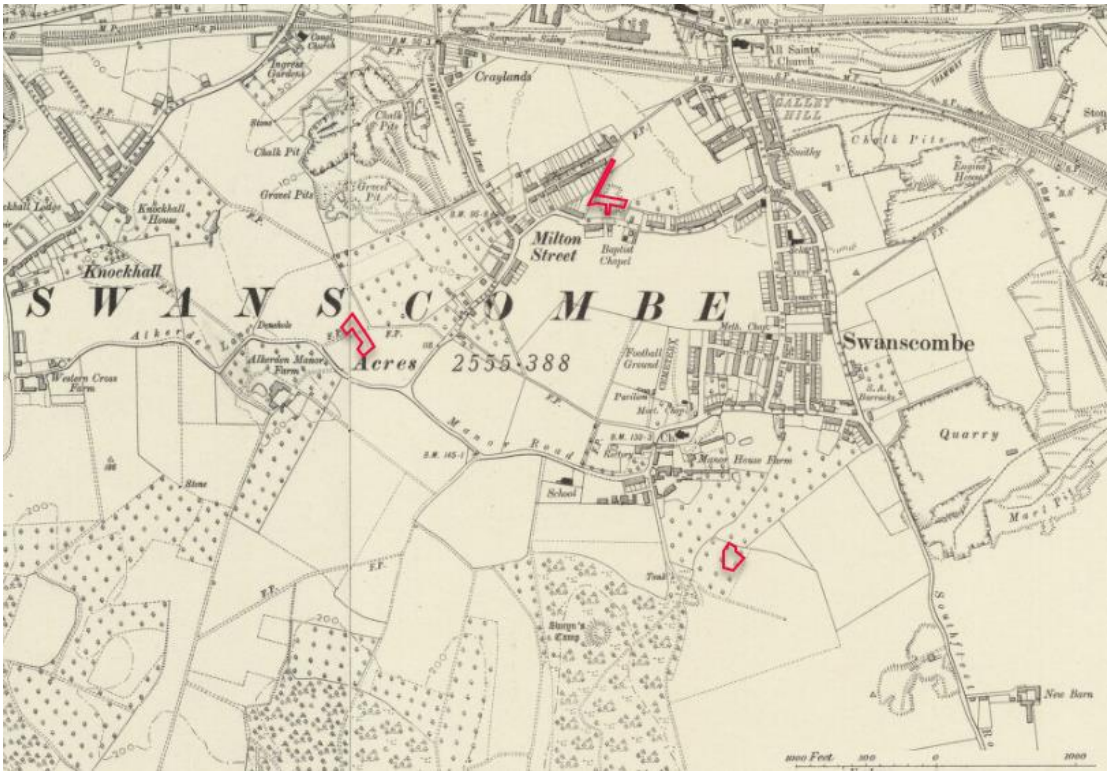


Figure 8: Historic OS Map 1908, PDA 1, 2 and 3

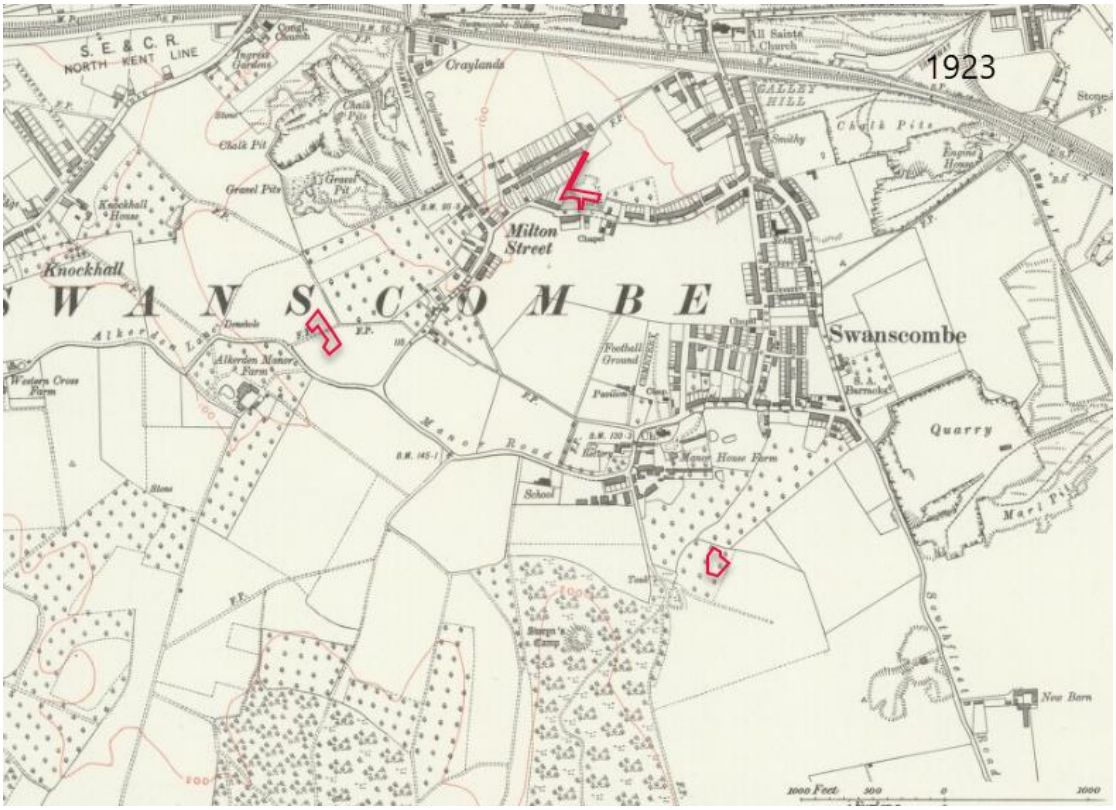


Figure 9: Historic OS Map 1923, PDA 1, 2 and 3

Figure 10: Historic OS Map 1946, PDA 1, 2 and 3

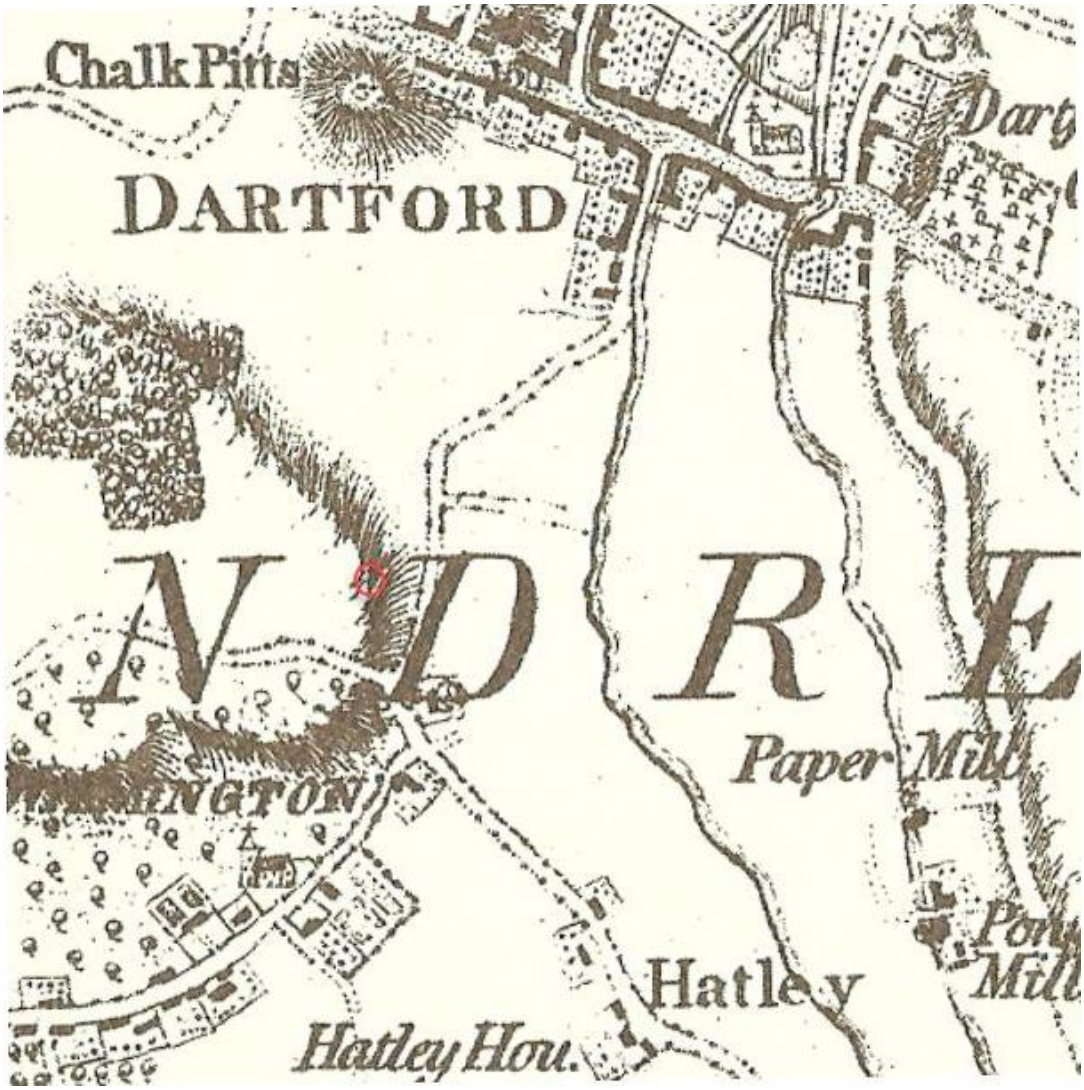


Figure 11: Andrews and Dury Map, 1769, PDA 4

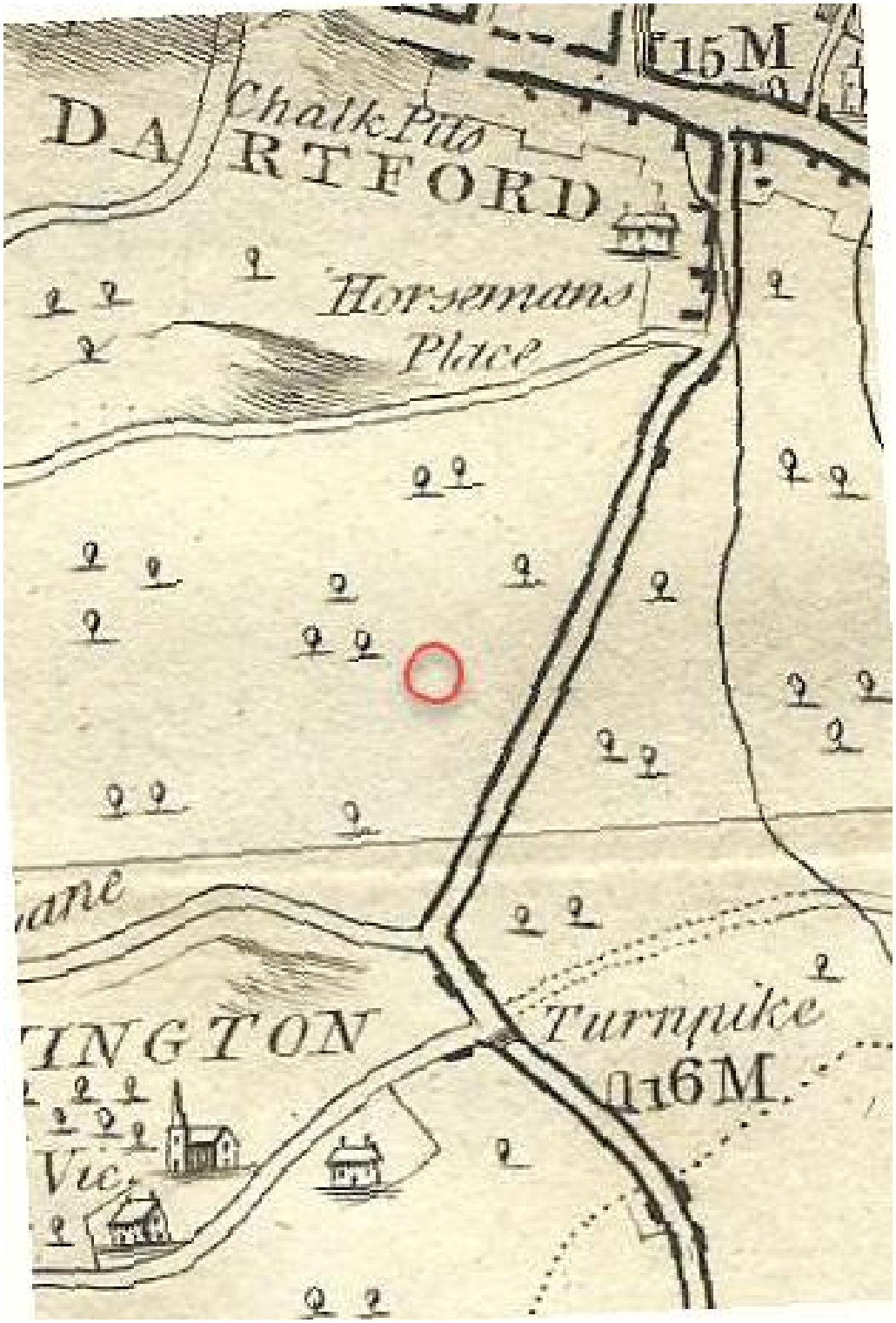


Figure 12: Hasted, 1797, PDA 4

Figure 13: Ordnance Surveyors Drawing, 1797, PDA 4

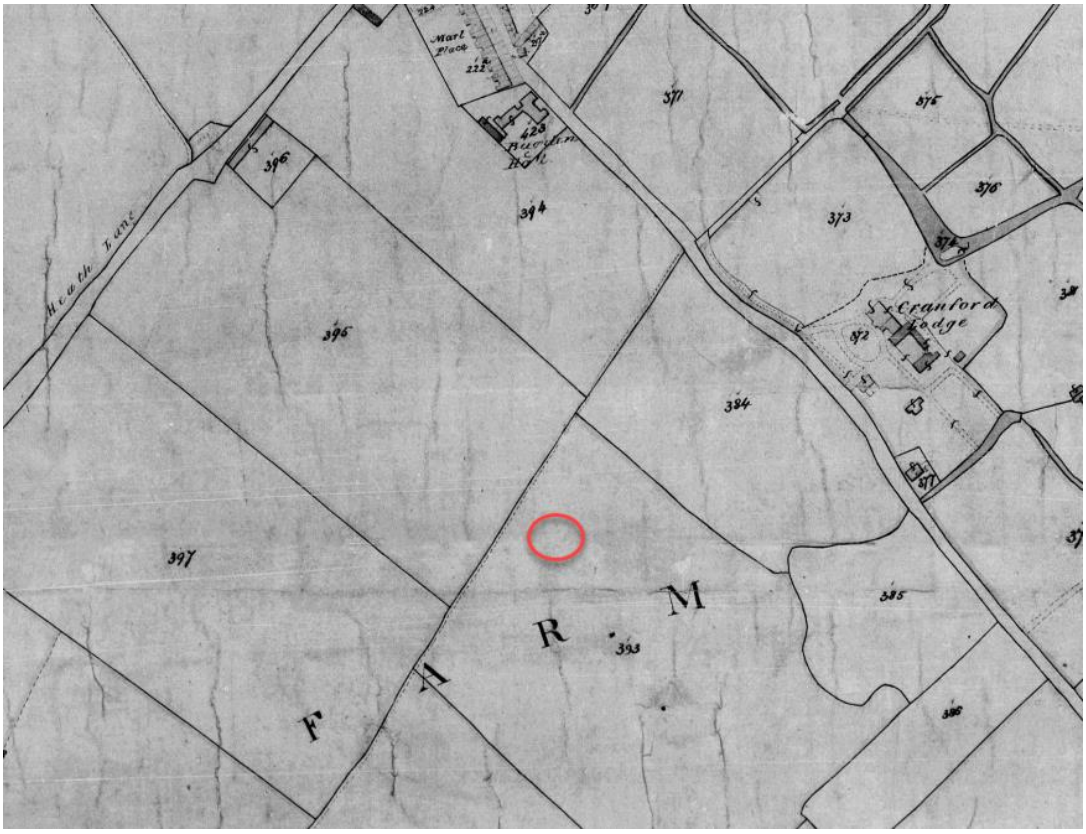


Figure 14: Dartford Tithe Map 1840, PDA 4.

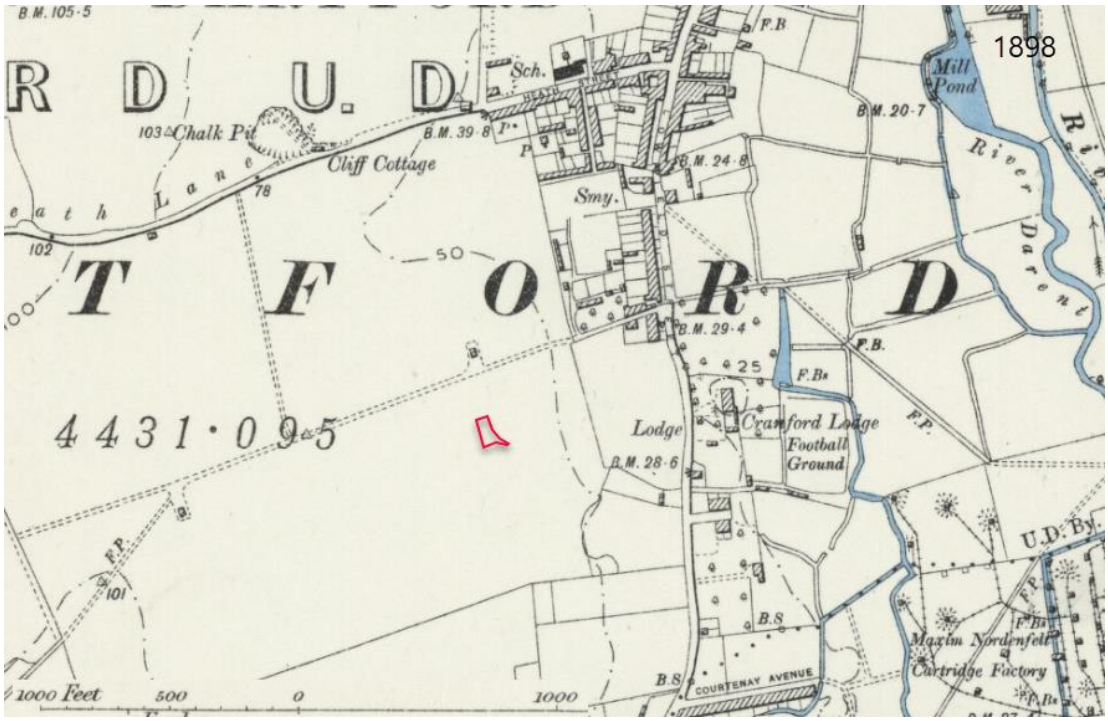


Figure 15: Historic OS Map 1898, PDA 4

Figure 16: Historic OS Map 1910, PDA 4

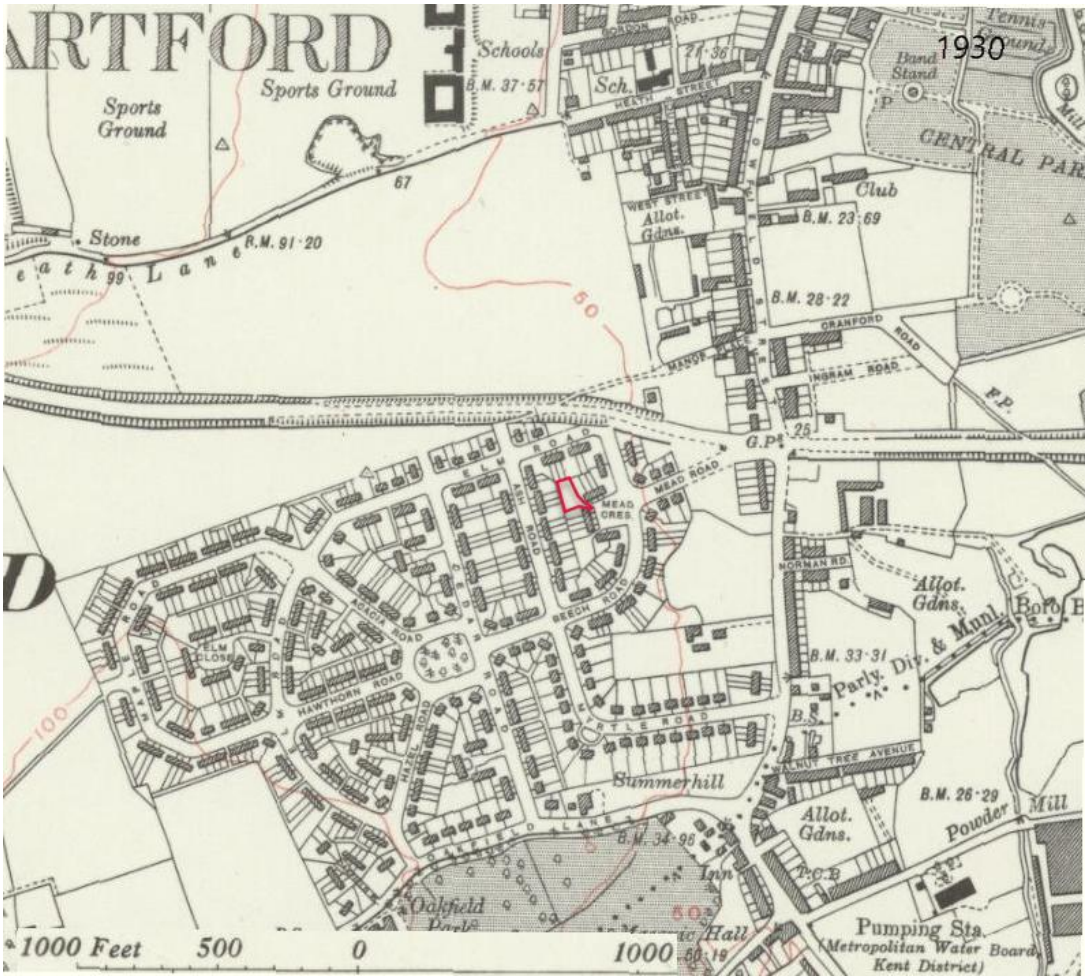


Figure 17: Historic OS Map 1930, PDA 4

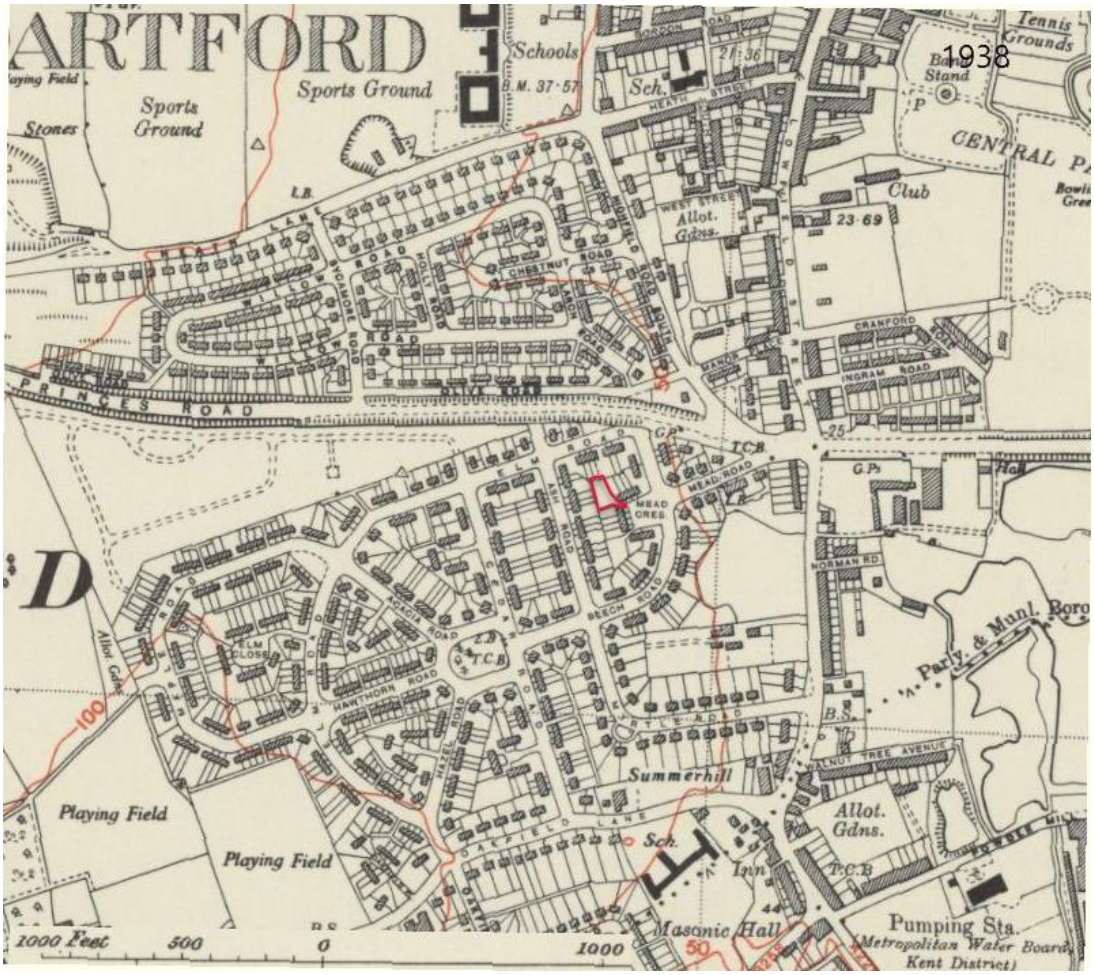


Figure 18: Historic OS Map 1938, PDA 4

15 APPENDIX 1 – KCC HER DATA (SEE FIGURES 19-25).

KHER	Type	Location	Period	Description
PDA 1 – Milton Road				
TQ 67 SW 34	Monument	180 NW	Lower Palaeolithic	16 ovate Palaeolithic handaxes from New Craylands Lane Pit (East Side) in 1911-1913, many of them twisted. The pit is partly filled in and has been developed for housing. Pleistocene sediments filling a small channel are present at the western end (SE-facing) of the N section, behind the garage forecourt at the back of Craylands Square; the remainder of the N section is predominantly colluvial/solifluction deposits, with gravel/sand pockets and Chalk involutions. Chalk bedrock overlain by shallow colluvial/solifluction sediments is present at the SW corner of the ME site. Pleistocene deposits with the original sequence may be preserved under the footpath at the E end of the ME site, which divides it from the recreation ground.
TQ 67 SW 499	Building	200m SE	Modern	A George VI pillar box, Milton Street / Amer Road. Letter Box Study Group Box Type: 35/1. Dates from 1938 to 1950.
TQ 67 SW 91	Monument	2512 NW	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic levallois flakes from New Craylands Lane Pit (East). Found in 1911-1913 in contorted clayey gravel capping the terrace sequence. They were separated from the underlying horizon with twisted ovates by a substantial thickness of sterile even-bedded sand and gravel. They thus represent a different, and possibly

				substantially later, phase of activity of very uncertain date.
TQ 67 SW 575	Monument	290m S	Modern	Boating pond in NW corner of Park Road public recreation ground used in the Second World War as an emergency water supply for the fire service in the event of inadequate supply from the mains to deal with fires caused by bombing. This appears to have originated by 1941. Post war the pond was filled in and is now a tarmac space marked for car parking.
TQ 67 SW 584	Monument	30m SE	Modern	Milton Road Second World War air raid wardens post and air raid siren, Swanscombe. Second World War air raid wardens post known to have existed from the end of 1939 on the north side of Milton Road, Swanscombe, Kent. Design unknown. Air raid siren added in late 1943. Site occupied today by modern housing.
TQ 67 SW 1436	Findspot	310m SE	Lower Palaeolithic to Middle Palaeolithic	Numerous Palaeolithic handaxes (and other flint artefacts) from general Swanscombe area. Collected in late 19th C, and held in Stopes' flint collection at NMW Cardiff, combined material from three sites in his catalogue: Swanscombe and vicinity (site no. 4), Acres between Northfleet Station and Swanscombe (site no. 30), and Bevan's field and hop garden (site no. 487). The combined collection from these three sites contains nearly 1400 handaxes, 61 cores, 1 Levallois flake, more than 220 flake-tools, and more than 670 pieces of debitage.
TQ 67 SW 1434	Findspot	315m NE	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic flint artefacts from Galley Hill, Swanscombe. A handaxe, a core and 9 pieces of debitage held in Stopes' flint collection at NMW Cardiff, all found by other people and then given or sold to Stopes.

TQ 57 SE 277	Monument	325m N	Post Medieval	North Kent Railway. Railway Station built in 1849 by the South East Railway on the North Kent Railway. Twin pavilions are linked by a Doric Colonnade. Listed Grade II.
TQ 67 SW 581	Monument	330m ENE	Modern	Air raid trench shelters in Mitchell's Yard, off Milton Road, Swanscombe, Kent. Mentioned in February 1939, presumably dating from the Munich Crisis of 1938. No other details known.
TQ 67 SW 109	Building	340m E	Post Medieval to Modern	Swanscombe Primitive Methodist chapel, Milton Road was opened in 1888. the building is shown on the Ordnance Survey map 1897-1900,1907-1923, 1929-1952.
TQ 67 SW 569	Monument	380m NE	Modern	The Alma Second World War air raid wardens post, Swanscombe. Second World War temporary placement of an air raid wardens post at the Alma public house, off the High Street, Swanscombe, Kent. This seems to have occupied an outbuilding in 1939, with arrangements being made at the beginning of 1940 for the relocation of its functions to another site. No other details are known.
TQ 57 SE 315	Monument	380m WNW	Modern	Craylands Lane (south) Second World War tunnel air raid shelter, Swanscombe. Second World War air raid shelter tunnel under Craylands Lane, Swanscombe. This was a quarry railway tunnel which had been sandbagged at its ends. This was done in September, 1939. No other details are known. The tunnel is no longer visible, having been buried under landfill. There was a similar shelter about 100 m to its north.
TQ 67 SW 576	Monument	385m S	Modern	Park Road recreation ground Second World War trench air raid shelters, Swanscombe. Under the football

				ground of the Park Road public recreation ground, Swanscombe, Kent. These were for the use of residents in the surrounding streets and were cut in September, 1939, probably to be decommissioned in 1945. They may still exist, with the entrances infilled and the ground surfaces made good.
TQ 67 SW 433	Monument	390m NE	Lower Palaeolithic	Numerous Palaeolithic handaxes and debitage from Boyn Hill terrace deposits in the Galley Hill Pit complex. Roe lists >140 handaxes, 2 cores, >35 flake-tools and >75 unworked debitage distributed between numerous museums, principally the British Museum. There were at least six separate pits in the Galley Hill area, around/between London Road and the railway in the vicinity of All Saints Church. None of the material is specifically provenanced to any particular pit.
TQ 67 SW 1430	Monument	400m NE	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic flint artefact found in fluvial deposits at north side of old New Craylands Lane Pit (East) during fieldwork in 1999, in advance of housing development (Neptune Park) within the old pit.
TQ 67 SW 572	Monument	415m E	Modern	Hope Road Second World War air raid shelters, Swanscombe. Second World War surface air raid shelters on the south side of Hope Road, Swanscombe. They occupied three sides of a rectangular yard (perhaps a former school playground) in separate oblong blocks, each being of brick with a flat concrete roof. Assumed constructed c. 1940 and decommissioned in 1945. No other information known. First noticed by the writer in 2000 and demolished c. 2001.
TQ 67 SW 577	Monument	420m E	Modern	Green's Yard Second World War air raid shelter, Swanscombe. Second World War public trench shelter at

				Green's Yard, Swanscombe, Kent. Made in September, 1939-January 40. Assumed decommissioned in 1945. No known traces.
TQ 67 SW 573	Monument	425m E	Modern	Harmer Road School fire services lecture room, Swanscombe. Used as a lecture theatre and drill hall for the National Fire Service/Auxiliary Fire service during the Second World War. No other details are known. The school was demolished about 2001.
TQ 57 SE 316	Monument	430m NW	Modern	Craylands Lane (north) Second World War tunnel shelter, Swanscombe. Second World War tunnel air raid shelter under Craylands Lane, Swanscombe. This quarry railway tunnel was made into a public shelter in September, 1939. No other details are known. It was later buried under landfill. There was a similar tunnel shelter about 100 m to its south.
TQ 94 SW 149	Monument	430m WNW	Post Medieval to Modern	Tram Rails, Barnfield Pit/Craylands Gorge. The rails of the tramline were presumably removed when the gorge fell into redundancy, and now only its route can be recognised. However, evidence of the former tramway does remain, in a scattering of timber railway sleepers lying in the undergrowth and a single section of track. The track no longer remains 'in situ' and has been moved to the western side of the tram bed (now pathway). The rails were fixed to concrete sleepers and therefore must belong to a later, ultimate phase of use or repair.
TQ 67 SW 198	Monument	435m NE	Modern	Swanscombe halt. Railway station on the North Kent Railway opened in 1849.
TQ 67 SW 568	Monument	435m NE	Modern	Swanscombe Station Second World War air raid shelter, Swanscombe. Second World War air raid shelter

				excavated in September, 1939, at Swanscombe railway station, High Street, Swanscombe, nr. Dartford, Kent. Design unknown. Presumably decommissioned in 1945. No longer extant.
TQ 67 SW 589	Building	450m N	Modern	Swanscombe Cement Works Second World War air raid shelter (east) under London Road. 12 m long pre-existing tunnel under London Road, Swanscombe, Dartford, Kent, joining two chalk quarries, used informally during the Second World War as an air raid shelter for the workers of the Swanscombe Cement Works, north of London Road. The tunnel still exists but its northern entrance has been blocked by a steel gate.
TQ 67 SW 570	Monument	450m NE	Modern	Parish Room Second World War First Aid Post, High Street, Swanscombe. Parish Room, on east side of High Street, Swanscombe, Kent used as First Aid Post during the Second World War. Originated in 1939 (sandbagged in September of that year). Longevity unknown. Later the Parish Room was demolished.
TQ 67 SW 101	Monument	450m SE	Post Medieval to Modern	Site of Wesleyan Methodist Chapel, Church Road shown on the Ordnance Survey map 1897-1900, 1907-1923, 19291952. A Scout hut is now on the site.
TQ 67 SW 454	Findspot	450m SSE	Lower Palaeolithic	Five Palaeolithic handaxes from vicinity of St. Peter and St. Paul's Church, Swanscombe. Five Palaeolithic handaxes from vicinity of St. Peter and St. Paul's Church, Swanscombe, some of them found in situ during grave digging, including one dug in 1898 for the antiquarian (and local butcher) George Clinch. The handaxes are held in NMW Cardiff as part of the Stopes collection. They seem to have come from deposits between c. 34m and 36m OD, which would broadly equate to Upper Middle

				Gravel or Upper Loam of the Barnfield Pit sequence. Bearing in mind the rarity of material from these higher horizons, this could be an important area for further investigation.
TQ 67 SW 574	Building	455m SSE	Modern	Mortuary Chapel in Swanscombe Cemetery, Gunn Road. It was used as a meeting place for civil defence personnel in the Second World War. No other details are known.
TQ 67 SW 512	Building	460m NE	Modern	A George V pillar box, George and Dragon PH, London Road, Swanscombe. Letter Box Study Group Box Type: 27/2. Dates from 1933 to 1936.
TQ 67 SW 452	Findspot	460m NE	Lower Palaeolithic	Two Palaeolithic flint cores from gravel at All Saints Church, Galley Hill. Collected late 19th C by H Stopes, possibly in conjunction with construction of the church, and held with Stopes lithic collection at NMW Cardiff.
TQ 67 SW 455	Findspot	460m NE	Lower Palaeolithic	Palaeolithic handaxe from Galley Hill tram tracks, Swanscombe. Collected by H Stopes in late 19th C, and held in Stopes lithic collection at NMW Cardiff.
TQ 67 SW 590	Monument	460m NNE	Modern	B Company 17th Battalion Kent Home Guard Second World War headquarters, London Road, Swanscombe. Second World War headquarters for B Company, 17th Battalion Kent Home Guard, on the north side of London Road, Swanscombe, Dartford, Kent. It utilised an existing building, either part of a school or an adjacent hall. It no longer exists; the site being occupied by the Swanscombe Business Centre.
TQ 67 SW 1431	Monument	465m NNE	Lower Palaeolithic	Palaeolithic handaxe and flakes from terrace gravels at Galley Hill Pit (N), aka 'Higgins' Pit'. Newton discusses the intrusive later Prehistoric skeleton found at the site [TQ 67 SW 41], but he also mentions at least 5 handaxes and

				one piece of debitage from the terrace gravels. This may be the same material as held in the Stopes collection at NMW Cardiff.
TQ 67 SW 633	Monument	470m N	Post Medieval to Modern	Gravesend, Rosherville and Northfleet Tramways, later the Gravesend and Northfleet Electric Tramways. Operated from 1883 until 1929.
TQ 67 SW 85	Listed Building	470m NE	Post Medieval to Modern	Church of All Saints. Grade II* listed (185781). 1894 R Norman Shaw Architect. Gothic style. Built of knapped flint with stone dressings. Nave, north aisle, chancel. Continuous tiled roof over nave, aisles and chancel, broken only by squat central tower. This has rectangular belfry windows. Above are battlements that rise towards the centre of the tower. Pyramidal shaped roof. Mullioned windows with pointed lights to north aisle. Five-light windows with Decorated tracery at east and west. Cross-shaped saddlestones to east and west gables. South gabled porch with cross-shaped saddlestones.
TQ 67 SW 1352	Building	470m NE	Post Medieval to Modern	Milestone on London Road, Dartford.
TQ 67 SW 41	Monument	470m NNE	Early Neolithic to Late Bronze Age	Later Prehistoric skeleton 'Galley Hill Man', interred in Pleistocene gravels at Galley Hill, Swanscombe. The 'Galley Hill Man' was found in 1888 in the gravel pit at Galley Hill, Swanscombe, 8 ft. below the surface. In general, their appearance is post-Palaeolithic rather than Palaeolithic. A fluorine test indicated that while an uppermost Pleistocene date for the burial of Galley Hill man is not entirely ruled out, a Holocene date is more likely. Oakley later indicated a likely Neolithic or Bronze

				age date for the skull based on C14 dating. The find-spot falls in a disused chalk pit.
TQ 67 SW 69	Findspot	475m NE	Neolithic	A polished axe from Galley Hill. Nothing more is known.
TQ 67 SW 588	Building	475m NE	Modern	Swanscombe Cement Works Second World War air raid shelter tunnel (centre) under London Road. 12 m long pre-existing tunnel under London Road, Swanscombe, Dartford, Kent, connecting two chalk quarries, used informally during the Second World War as an air raid shelter by workers of the cement works north of London Road. The tunnel probably still exists but its north entrance appears to have been blocked post-war with earth and rubble.
TQ 67 SW 519	Building	475m SE	Modern	A George V pillar box, 125 Church Road. Letter Box Study Group Box Type: 27/1. Dates from 1930 to 1933.
TQ 67 SW 571	Monument	490m NE	Modern	All Saints Church Second World War air raid shelter, Swanscombe. Second World War public trench air raid shelter dug in September, 1939, next to All Saints Church, off High Street, Swanscombe, Kent. Lined in concrete in January, 1940. Exact site unknown and presumably decommissioned in 1945. No other details known.
TQ 67 SW 43	Monument	490m NNE	Roman	Romano-British pottery kiln found AD 1904. A type IV Roman pottery kiln, 3 1/2 ft. in diameter, with pottery fragments nearby, was uncovered at a depth of 5 ft. below the surface, 20 yds. north from where the Galley Hill man was found.
TQ 57 SE 85	Findspot	490m WSW	Mesolithic	Mesolithic flint implements from Swanscombe. Unretouched blades and flakes, cores, tranchet axes,

				scrapers and other axe types. Finds located in Dartford, Hastings, Maidstone and Rochester Museums.
MKE57956	Findspot	500m NW	Lower Palaeolithic	PAS find. Palaeolithic flint implement, Swanscombe. Acheulian chopper. Chance find in 1998.
MKE57957	Findspot	500m NW	Lower Palaeolithic	PAS find. Palaeolithic handaxe. Small Palaeolithic hand axe knapped from flint with an olive-grey patination. No natural cortex survives on the surface of the flint. The axe has a twisted 'S' shaped profile. The axe is 65mm long and 50mm wide. Chance find in 1997.
MKE57958	Findspot	500m NW	Lower Palaeolithic	PAS find. Palaeolithic handaxe. Acheulian axe. Chance find in 1998.
MKE57959	Findspot	500m NW	Lower Palaeolithic	PAS find. Palaeolithic handaxe. Natural cortex survives on one surface. The axe is approximately 50mm long and 50mm wide. Chance fin in 1997.
MKE58021	Findspot	500m NW	Medieval to Post Medieval	PAS find. Medieval copper alloy seal matrix. A circular seal matrix, conical handle with trefoil piercing, central motif of bird feeding baby birds in nest, inscribed 'M NICHOLAS DE BESEPBR ?'
MKE58028	Findspot	500m NW	Post Medieval	PAS find. Post Medieval silver coin. Dated 1558-1582 AD.
TQ 67 SW 111	Monument	70m SSE	Post Medieval to Modern	Site of Baptist Chapel, Milton Road. The building is shown on the Ordnance Survey map 1907-1923, 1929-1952.
PDA 2 – Keary Road				
TQ 67 SW 484	Monument	170m NNW	Modern	WWII PoW camp. Demolished.
TQ 67 SW 1007	Findspot	180m SW	Unknown	Undated burnt flint, located at Pan Handle, Swanscombe. An archaeological evaluation involving a

				number of test trenches took place at Pan Handle, Swanscombe in 2006. A small number of undiagnostic burnt flint pieces were recovered from the upper interface of trench 12, there is a large amount of modern disturbance in the area suggesting the flint pieces are modern.
TQ 67 SW 471	Findspot	195m E	Unknown	Possible Large Herbivore Fossil, Swanscombe Community School.
TQ 67 SW 1429	Findspot	210m NNW	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic handaxe finds from Manor Farm. Two handaxes seen by Roe from Manor Farm, Swanscombe, one in Plymouth Museum and the other in Herne Bay Museum. Site is taken as 'Manor House Farm' rather than the nearby 'Alkerden Manor Farm' which is a bit further out of Swanscombe to the west. No info on circumstances of discovery.
TQ 67 SW 175	Monument	215m N	Medieval to Modern	Swanscombe Manor (site of), 18thC House on Medieval foundations. demolished in 1960s part of site presently occupied by council offices (with future redevelopment for housing possible). East part of house foundations probably destroyed during construction of offices. Parts of C18-19 foundation on W side revealed by excavation in 1991. These were shown to be set on earlier foundations of a medieval house. The area to the E of the house site formerly contained gardens.
MKE84109	Farmstead	220m NNW	Post Medieval	Manor House Farm. A regular multiyard farmstead. Farmhouse detached in central position. Altered - significant loss of original form (more than 50%). Only Oast survives.

TQ 67 SW 57	Findspot	220m NNW	Roman	Samian ware dug up on Swanscombe Manor Estate near Northfleet, Kent "maker's name Marcio" was exhibited at a temporary museum at Hastings in 1862.
TQ 67 SW 245	Monument	235 ESE	Lower Palaeolithic	Palaeolithic handaxes, other flint artefacts and animal bone from area E1, Eastern Quarry Area B, Swanscombe. Numerous handaxes, other flint artefacts and associated faunal remains were found in Pal. area E1, on the northern side of Area B, during fieldwork in advance of construction of the Castle Hill housing development in the old Eastern Quarry. Three handaxes were initially found during preliminary geo-archaeological evaluation. further finds were then made during subsequent further evaluation and mitigation.
TQ 67 SW 36	Listed Building	260m NNW	Early Medieval or Anglo-Saxon to Modern	Church of SS Peter and Paul, Swanscombe. Grade I listed (1085788). The Church of S.S. Peter & Paul, Swanscombe, severely damaged by fire in 1902, is pre-Conquest to 15C. and later. '... The only grounds apparent for ascribing a pre-Conquest date to the tower are to be found in the double splayed window, the head and splays of which are formed of Roman brick, but beyond this use of Roman material, there are no other characteristics of pre-Conquest architecture whatever... The east end of the south aisle was probably screened off to serve as a chapel. Rebuilt in the 12th and enlarged and extended in the 13th and 14th centuries, with internal additions in the 15th c. and later, the roof, and presumably the porch, is modern. Heavily restored by Jabez Bignall in 1872-3 and repaired by him after a fire in 1902.

TQ 67 SW 1184	Listed Building	275m NNW	Post Medieval	Churchyard wall, gates and gate piers to north of church of St Peter and ST Paul, fronting Swanscombe Street. Grade II listed (1101457). Circa 1870. Flint wall about 4 ft in height with courses of brickwork and hipped brick cap. Cemented base. Red brick integral pilasters at intervals. In the centre are 2 flint piers with pyramidal caps supporting a lamp bracket and iron gates. Included for group value
TQ 67 SW 325	Monument	290m E	Roman	Roman Road, Swanscombe Thameside Community School. To the south west of a walled Roman ritual enclosure, evidence was found of an early Roman period road with metaling and a ditch running northwest - southeast. The stretch found was only small, but the alignment could suggest that it was leading southward to Watling Street.
TQ 67 SW 221	Monument	290m NE	Lower Palaeolithic	Palaeolithic handaxes, other flint artefacts and mammal bones, from Ebbsfleet Academy (formerly Swan Valley School, and other previous names). Evaluations and mitigation work between 1997 & 2001, prior to redevelopment, uncovered a quantity of worked flints, handaxes and Pleistocene mammal remains.
TQ 67 SW 93	Findspot	295m NE	Lower Palaeolithic	6 Palaeolithic handaxes from Hop Garden near Mansion House, Swanscombe. Collected by H Stopes in late 19th C, part of the Stopes flint collection held at NMW Cardiff
TQ 67 SW 585	Monument	305m WNW	Modern	Manor Road, Second World War air raid wardens post, Swanscombe. Second World War air raid wardens post on the south side of Manor Road, Swanscombe, Kent. Existing by December, 1939. This may have occupied a pre-existing building. Post strengthened in 1943. No

				other information known. The site is now occupied by modern housing.
TQ 67 SW 1435	Findspot	315m NNE	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic handaxe found in garden at Mansion House, Swanscombe. Held in Stopes' flint collection at NMW Cardiff, site no. 619 in his catalogue.
TQ 67 SW 1443	Findspot	320m N	Lower Palaeolithic	Palaeolithic artefact from gravel under new shop for Mr Ames, Swanscombe. Collected in late 19th C. Listed in the Stopes flint collection catalogue as no. 656. The actual artefact could not be found when the collection was studied by F Wenban Smith in 2003-2004, but was most likely a handaxe. The location of Ames' shop was established by consulting Victorian directories.
TQ 67 SW 222	Monument	325m NE	Roman	Roman Ritual Enclosure Site and Farmstead, Swanscombe Thameside Community School. The site of a walled enclosure (mid-1st century to late 3rd/early 4th) with the outer wall foundations of chalk and flint. It was surrounded on at least two sides by ditches that contained metal working slag and were infilled by the late to mid-3rd century. Within the walled area were Roman features consisting of the postholes of timber buildings, rubbish pits, a possible corn drier or kiln and a cremation. Roughly central had been a masonry building, possibly open on the western side, which may have had a ritual function. It had been partly robbed out in the 11th century. Pottery found suggests that the site dates to the Roman period between the late 1st and 4th centuries. The walled enclosure and farmstead features probably represent distinct phases.
TQ 67 SW 454	Findspot	325m NNW	Lower Palaeolithic	Five Palaeolithic handaxes from vicinity of St. Peter and St. Paul's Church, Swanscombe. Five Palaeolithic

				handaxes from vicinity of St. Peter and St. Paul's Church, Swanscombe, some of them found in situ during grave digging, including one dug in 1898 for the antiquarian (and local butcher) George Clinch. The handaxes are held in NMW Cardiff as part of the Stopes collection. They seem to have come from deposits between c. 34m and 36m OD, which would broadly equate to Upper Middle Gravel or Upper Loam of the Barnfield Pit sequence. Bearing in mind the rarity of material from these higher horizons, this could be an important area for further investigation.
TQ 67 SW 574	Building	325m NNW	Modern	Mortuary Chapel in Swanscombe Cemetery, Gunn Road. It was used as a meeting place for civil defence personnel in the Second World War. No other details are known.
TQ 67 SW 47	Monument	330m SW	Medieval	Sweyn's camp, possible medieval motte or prehistoric barrow? Earthwork in Swanscombe Park. Known by this name since 1890 and probably formerly called 'the Folly'. A circular earthwork evidently a motte, almost certainly Norman. There is no indication of a bailey. Some nine pits, to the north of the camp, which are regular in form are probably the sites of dwellings. Pits V & VI were partly excavated to the undisturbed clay. Fragments of a 15thcentury costrel were found in pit V with some fragments of iron. In 1928 the earthworks were destroyed.
TQ 67 SW 457	Monument	345m SE	Lower Palaeolithic	Castle Hill (formerly Eastern Quarry): Area E5, abundant Palaeolithic handaxes and debitage on palaeo-landsurfaces (now deeply buried). Found during evaluation in 2005 in advance of the Castle Hill housing

				development. Very rich artefact recovery from deeply-buried presumed palaeo-landsurfaces in test pits. The combined totals of artefacts are: 19 handaxes, 7 flake-tools and more than 1500 flakes. All of the material is in mint condition, suggesting an undisturbed occupation/activity site above the banks of the river that would have been a short distance to the north. The artefact-rich horizons occurred between 29m and 31m OD.
TQ 67 SW 56	Monument	410m E	Roman	Roman tile cist inhumation. discovered by a workman in Oct. 1955 in a hedge bank 2ft. below ground surface at the side of a chalk pit backing on to the Southfleet Road. The grave must have been exposed during excavation some years previously but its significance was not realised. The head lay to the north and nails found near the bones suggest enclosure in a wooden coffin. The skeleton remains, probably female, are at the British Museum
TQ 67 SW 1438	Monument	410m ESE	Lower Palaeolithic	Castle Hill (formerly Eastern Quarry, Area B): Palaeolithic artefacts and mollusc remains. At least five handaxes and 40 pieces of debitage were found during investigations in this part of the Castle Hill site, initially as part of the wider Area B evaluation, and then subsequently during targeted investigations in conjunction with the construction of a surface water drainage pond. Molluscan remains were also recovered from sampling of fine-grained sand/silt sediments lower down the sequence.
TQ 67 SW 1439	Monument	410m SE	Lower Palaeolithic	Three Palaeolithic handaxes from TP 127, Castle Hill (formerly Eastern Quarry, Area B). Found in June 2008,

				during targeted Palaeolithic evaluation test pits to south of Area B. All three handaxes were found in one fluvial gravel horizon, c. 4m below the ground surface (which here was at c. 30.50m OD), below about 3m of sterile gravel. The handaxes were all very similar, being of small size, quite well made and of pointed shape, and mostly in fresh condition.
TQ 67 SW 240	Monument	415m SE	Post Medieval to Modern	Site of Small Clay Pit, West of Southfleet Road. Established by the late 19th century, the quarry was eventually linked via a tramway to more extensive works, formerly part of the Swanscombe park, to the south-west. The quarry became redundant by the 1930's. Currently the quarry is overgrown with scrub and small trees, areas appear to have been backfilled, although the tramway cutting linking to the Swanscombe Park quarry survives, predominantly due to its adaptation as a public footpath. No evidence of tramlines or other quarry related technology survive.
TQ 67 SW 183	Monument	415m SE	Modern	Royal Observer Corps post west of Southfleet Road. Cold War Royal Observer Corps Post at the side of a trackway on farmland west of Southfleet Road, Swanscombe, Kent. For plotting nuclear explosions and monitoring radioactive fallout. An underground post, it originated in c. 1965 and was discontinued after 1968. Designated 1/A1. Thought to have been destroyed or infilled.
TQ 67 SW 576	Monument	420m NW	Modern	Park Road recreation ground Second World War trench air raid shelters, Swanscombe. Under the football ground of the Park Road public recreation ground, Swanscombe, Kent. These were for the use of residents in the surrounding streets and were cut in September,

				1939, probably to be decommissioned in 1945. They may still exist, with the entrances infilled and the ground surfaces made good.
TQ 67 SW 517	Building	435m E	Modern	A George V pillar box, Durrant Way / Leonard Avenue. Letter Box Study Group Box Type: 27/3. Dates from 1936 to 1937.
TQ 67 SW 244	Findspot	435m ESE	Neolithic	Surface Flint Lithics, Eastern Quarry, Swanscombe. During a geophysical survey on an area of Eastern Quarry a number of flint flakes, pot-boilers and a scraper were noted. They were described as being of Neolithic date.
TQ 67 SW 174	Findspot	460m ENE	Bronze Age	Bronze Age socketed axes and a palstave. Four bronze socketed celts and a bronze palstave, probably from Baker's Hole, purchased at the sale of the late GM Arnold's Museum, Gravesend in 1912 by WH Cooke, Snodland.
TQ 67 SW 101	Monument	470m NNE	Post Medieval to Modern	Site of Wesleyan Methodist Chapel, Church Road shown on the Ordnance Survey map 1897-1900, 1907-1923, 19291952. A Scout hut is now on the site.
TQ 67 SW 519	Building	475m NNE	Modern	A George V pillar box, 125 Church Road. Letter Box Study Group Box Type: 27/1. Dates from 1930 to 1933.
TQ 67 SW 35	Monument	490m NE	Lower Palaeolithic	Palaeolithic artefacts and molluscan remains from Ricksons Pit, AKA Barracks Pit. Numerous Palaeolithic artefacts of varying types (handaxes, Clactonian cores/flakes, and flake-tools) were collected at this pit (east of Stanhope Road, Swanscombe) when it was open in the 1930s-1950s. Molluscan remains were also observed in deposits in its west face, which still survive. It is now backfilled and landscaped, but natural deposits survive around at the west edge of the pit, and along its

				north face, under the footpath heading east from Swanscombe.
TQ 67 SW 575	Monument	500m NW	Modern	Boating pond in NW corner of Park Road public recreation ground used in the Second World War as an emergency water supply for the fire service in the event of inadequate supply from the mains to deal with fires caused by bombing. This appears to have originated by 1941. Post war the pond was filled in and is now a tarmac space marked for car parking.
PDA 3 – Gilbert Close				
TQ 57 SE 85	Findspot	200m N	Mesolithic	Mesolithic flint implements from Swanscombe. Unretouched blades and flakes, cores, tranchet axes, scrapers and other axe types. Finds located in Dartford, Hastings, Maidstone and Rochester Museums.
TQ 57 SE 221	Findspot	220m S	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic handaxe surface finds from vicinity of Alkerden Manor Farm, Swanscombe. 5 Palaeolithic handaxes, surface finds from "Chamber's Farm, Alkerden" in Stopes Collection in NMW Cardiff.
MKE83994	Farmstead	230m SW	Post Medieval	Alkerden Manor Farm. A loose courtyard plan farmstead with buildings to three sides of the yard. Farmhouse detached in central position. Altered - significant loss of original form (more than 50%).
TQ 57 SE 1089	Findspot	235m NNW	Lower Palaeolithic to Middle Palaeolithic	Palaeolithic handaxes, surface finds from "top fields" beside the Great Pit, Milton Street. 60 Pal handaxes, surface finds from top fields beside the Great Pit, Milton Street, made in the late 19th C by H Stopes. Also, more than 70 pieces of debitage. Location later incorporated in Barnfield Pit expansion.

TQ 57 SE 202	Monument	270m NW	Modern	Cast Iron Pipe, Swanscombe Heritage Centre and Craylands Gorge. Two large cast iron pipes running parallel to the tramway at the base of Craylands Gorge. These act as de watering pipes for the Eastern Quarry and are kept in working condition, with some new couplings visible. In some parts the pipes are wrapped in tarpaper.
TQ 57 SE 150	Monument	290m N	Post Medieval to Modern	"Barnfield Pit (Collyers Pit or New Craylands Lane Pit). Barnfield Pit was opened in the later 19th century, sometime between 1862 and 1899 as it is shown on the 2nd ED OS map, to supply gravel and then chalk to the main Swanscombe Cement works to the north-east (TQ 67 NW 98). It formed an extension to the Claylands Pit which lay between the railway line and London Road. During the 1920's two tramlines were built along the western edge of the quarry which later linked the pit to other pits opened to the south (TQ 67 NW 99) via a pair of tunnels extending below first, the southerly footpath crossing the pit and the Alkerden Road.
TQ 57 SE 242	Findspot	290m NNW	Early Bronze Age	The main part of the quarry was backfilled in the 1950's and 1960's using Thanet Sand. This buried industrial features such as the engine and pump houses (TQ5984974647 & TQ 5987874596) and lower tramways.
TQ 67 SW 45	Findspot	325m SE	Roman	"
TQ 67 SW 49	Findspot	325m SE	Roman	Bronze Age Pottery, Collyers Pit. Evidence of a middle Palaeolithic occupation level (TQ 57 SE 51) was found in 1931 by Burchell, in Collyers Pit, Swanscombe, at TQ 59737452. Also found were small sherds of early Bronze Age. coarse, gritty pottery. No further information. The

				finds are in the B M. Collyers Pit is now disused and overgrown.
TQ 67 SW 50	Findspot	325m SE	Mesolithic	Roman bronze statuette (Osiris). from the Roman camp at Swanscombe, is in the British Museum (1-2). There is no established Roman Camp at Swanscombe, only a Roman Building (TQ 67 SW 38). A more likely provenance for this figurine is the Springhead Roman site (Vagniacae) at the SE tip of the parish (TQ 67 SW6).
TQ 67 SW 51	Findspot	325m SE	Iron Age	Unprovenanced Roman amphora from Galley Hill, was presented to Dartford Museum by Mr. Roy Lane, 9 Orchard Road, Galley Hill, Swanscombe. (1) Mr. Lane could not be traced. He does not live in Orchard Road at the present time, and has never resided at No. 9. No further information was obtained from reference.
TQ 67 SW 59	Findspot	325m SE	Roman	Three small Thames picks, found at Swanscombe and in store in Maidstone Museum, are part of the Jones Bequest per the BM 24.9.1914. There is no further information concerning their provenance.
TQ 67 SW 96	Monument	325m SE	Post Medieval	Iron Age uninscribed gold stater found at Swanscombe. Evans type A.4, Allen's Gallo. Belgic A B 1 (Bellovaci), [Mack No.3], found at Swanscombe. Present whereabouts unknown.
TQ 67 SW 97	Monument	325m SE	Post Medieval	Roman "Aucissa" brooch found at Swanscombe. A complete Aucissa brooch of Colchester type XVIII B (Collingwood Group C) in iron, having an unusually arrow bow with beaded ornament down the centre. Neither the provenance nor present whereabouts of this brooch were discovered during fieldwork.
TQ 57 SE 196	Monument	335m W	Post Medieval to Modern	Site of Ye chantry, 75 high street.

TQ 57 SE 351	Monument	355m WNW	Modern	Site of Manor farm.
TQ 57 SE 197	Monument	360m W	Modern	Cast Iron Bridge, Swanscombe Heritage Park & Craylands Gorge of late Post Medieval or modern date. Carries a footpath over the Craylands Gorge near its southern end. Rests on a causeway of chalk and earth running across the gorge.
TQ 57 SE 203	Monument	390m W	Modern	Slit trench, rise east of sports field near Knockhall Road, Greenhithe. Second World War slit trench on a rise east of the sports field near Knockhall Road, Greenhithe, Kent. Believed to have been a fire trench, perhaps associated with the searchlight battery about 50 m to the west (PUID 10389). There are no other details. No traces remain today.
TQ 94 SW 149	Monument	400m NNE	Post Medieval to Modern	Concrete Tunnel, Swanscombe Heritage Park & Craylands Gorge. Tunnel bored through chalk causeway left across Crayland Gorge, through which the tramway runs. Lined with concrete sections and with remains of telegraph (?) system fittings on the south side. Iron gates at North End.
TQ 57 SE 350	Monument	405m SW	Modern	Concrete Tramway Tunnel, Swanscombe Heritage Centre & Craylands Gorge. Tunnel bored through chalk linking Craylands Gorge to Western Cross Quarry. Lined with concrete sections. Remains of a telegraph (?) system.
TQ 67 SW 499	Building	40m NE	Modern	Tram Rails, Barnfield Pit/Cray lands Gorge. The rails of the tramline were presumably removed when the gorge fell into redundancy, and now only its route can be recognised. However, evidence of the former tramway does remain, in a scattering of timber railway sleepers lying in the undergrowth and a single section of track.

				The track no longer remains 'in situ' and has been moved to the western side of the tram bed (now pathway). The rails were fixed to concrete sleepers and therefore must belong to a later, ultimate phase of use or repair.
TQ 57 SE 315	Monument	410m NNE	Modern	Knockhall Second World War searchlight battery in a sports field, east of Knockhall Road, Greenhithe. Second World War anti-aircraft searchlight battery in a valley site, now a sports field, east of Knockhall Road, Greenhithe, Kent. There were associated Nissen huts. Date of origin and longevity are unknown. The site was cleared post war to become a sports field.
TQ 57 SE 166	Monument	450m NNW	Modern	A George VI pillar box, Milton Street / Amer Road. Letter Box Study Group Box Type: 35/1. Dates from 1938 to 1950.
TQ 57 SE 201	Monument	460m NNW	Post Medieval to Modern	Craylands Lane (south) Second World War tunnel air raid shelter, Swanscombe. Second World War air raid shelter tunnel under Craylands Lane, Swanscombe. This was a quarry railway tunnel which had been sandbagged at its ends. This was done in September, 1939. No other details are known. The tunnel is no longer visible, having been buried under landfill. There was a similar shelter about 100 m to its north.
TQ 57 SE 84	Monument	465m NNW	Later Prehistoric	Foot Bridge, Barnfield Pit/Craylands Gorge. Footpath to the north and running along the top of a ridge of spoil linking Craylands Lane to Knockhall Road added during the 1920s. At this point a cast-iron footbridge was built to span the gap between the quarry edge and the footpath causeway, needed to allow the western tramway to pass.

TQ 57 SE 68	Monument	495m N	Roman	Cast Iron Footbridge, Swanscombe Heritage Park and Craylands Gorge. Footbridge of cast iron box frame/angle iron construction. Side panels formed of X-panels infilled with diamond mesh. Built on concrete pads at either end with additional iron frame supports resting on concrete pads at the base of Craylands Gorge.
TQ 57 SE 1003	Findspot	50m W	Lower Palaeolithic	Post-Palaeolithic flint artefacts with coarse pottery, Greenhithe. At Greenhithe, in Kent, resting upon the melt water gravels of the Coombe rock glaciation an industry similar to that at Flamborough Head, consisting of flake implements, struck from small tortoise cores. This industry exhibits a minor variation in that the tortoise cores appear to be replaced by an ordinary core with a dressed striking platform. In both instances, small Levallois flakes are produced. There were also found fragments of coarse, gritty, undecorated pottery associated with the artefacts.
TQ 57 SE 219	Monument	90m N	Lower Palaeolithic	"New crayland's lane pit. A quantity of human and animal bones and 2nd/3rd c Roman pottery was excavated by B.O.Wymer from a cavity 30ft. deep in the sides of New Craylands Lane pit, Swanscombe, and presented to the museum 19.9.1958. The finds could not be traced at Dartford Museum. They may be in store among objects of unknown provenance. New Craylands Lane Pit, also known as Barnfield Pit, is centred at TQ 598747.
PDA 4 – Mead Crescent				

TQ 57 SW 310	Building	130m E	Modern	George V pillar box, 11 Mead Road, Letter Box Study Group Box Type: 27/1. Dates from 1930 to 1933.
TQ 57 SW 312	Building	200m SW	Modern	George V pillar box, Beech Road / Cedar Road, Letter Box Study Group Box Type: 27/2. Dates from 1933 to 1936.
TQ 57 SW 400	Monument	225m SW	Modern	Cedar Road Second World War trench air raid shelter. It appears to have been provided within an open space or square abutting the west-central part of the road. Its date of construction is unknown but in 1942 was fitted with an electric boiler, hot cupboards and food boxes. The shelter remained in use until 1945. Its apparent location is now occupied by later buildings.
TQ 57 SW 323	Building	430m W	Modern	George VI pillar box, 33 Rowan Crescent. Letter Box Study Group Box Type: 35/1. Dates from 1938 to 1950.
TQ 57 SW 113	Findspot	380m SSE	Palaeolithic	One Palaeolithic handaxe from the bottom of Oakfield Lane, junction with Lowfield Street, Wilmington. Find is equated with Brotherwood's Pit to the south in Southern Rivers Palaeolithic Project but no basis for this. Brotherwood's Pit deposits described by Shephard-Thorn (from Dewey's notes) as very disturbed with mixed masses of Coombe Rock.
TQ 57 SW 174	Monument	400m SSE	Roman	Possible Roman Building, Oakfield Lane Primary School. Present work consists of trial excavations on two sites near the "Orange Tree" Public House in an endeavour to trace the whereabouts of a Roman building which according to old references lay near here.
TQ 57 SW 401	Monument	440m SSE	Modern	Oakfield Lane Junior School, Second World War air raid shelter. From August 1940 it was made available for members of the public outside school hours. Of uncertain design it probably originated in 1939 and may

				have remained in commission until 1945. Whether surviving is unknown.
TQ 57 SW 286	Monument	460m SSE	Prehistoric / Roman	Prehistoric or Roman features at Oakfield's Infant School, A probable domestic hearth area, and above that, Roman ceramic building material. A possible prehistoric/Roman pit and gully was also recorded during an evaluation
TQ 57 SW 78	Findspot	500m SSE	Palaeolithic	Two Palaeolithic handaxes from the foot of Church Hill Wilmington. No further information. First reported in 1924
TQ 57 SW 12	Monument	460m SE	Roman	Wilmington Roman Villa. Roman foundations near the Orange Tree Inn, Wilmington. About 1886, numerous tiles, extensive foundations showing wide rooms and narrow passages, with coins all of Roman date, were seen about 150 yards S.E. of the Orange Tree Inn. [TQ 5417 7299] Roman foundations near the Orange Tree Inn, uncovered about 1886. Spurrell states that they were 150 yards S.E. of the inn, but on map facing p. 307 he shows the site to the N.E. TQ 5417 7299. Siting 150 yards N.E. of the former site of the Orange Tree Inn, falls upon ground occupied by modern houses bordering Walnut Tree Avenue. No further information can be found regarding this find. Present location of coins not ascertained.
TQ 57 SW 331	Monument	440m SE	Roman	Roman ditches. Five ditches, probably of Roman date but containing late Roman or possibly early post Roman pottery. In 2012 Canterbury Archaeological Trust carried out an evaluation immediately to the north of the villa site.

TQ 57 SW 330	Findspot	440m SE	Neolithic	Neolithic Flint, Trafalgar Road. In 1975 the Dartford District Archaeological Group found Neolithic flints whilst excavating the villa site. In 2012 Canterbury Archaeological Trust carried out an evaluation immediately to the north of the villa site. A flint blade of Neolithic type was found.
TQ 57 SW 280	Findspot	435m SE	Early Iron Age to Post Medieval	Finds at 3 Hawley Road, Wilmington. During an evaluation a number of small finds were discovered. These were varied in date but do not indicate occupation of the site. The close proximity of a Roman house to the south would account for these finds.
TQ 57 SW 327	Building	415m SSE	Modern	George VI pillar box, Hawley Road, Orange Tree. Letter Box Study Group Box Type: 35/1. Dates from 1938 to 1950.
TQ 57 SW 402	Monument	320m ESE	Modern	Harrison and Barber premises Second World War mortuary. emergency mortuary for air raid fatalities established probably at the beginning of 1940 in premises of Messrs Barber and Co. Ltd off Norman Road, Dartford, Kent. An adjoining house was used as waiting accommodation for relatives and for office requirements. The exact location is unknown but from the description this is likely to have been close to the grid reference given below. Longevity is unknown. The area now contains post-war development.
TQ 57 SW 216	Monument	295m E	Bronze Age	Late Bronze Age site, Lowfield Street. Although pit and ditch features were found there was no evidence to support the idea of an occupation site, but one must have been close by. The early features date from the Bronze Age, with pottery recovered, including boss-decorated pot sherds, from deposits dated to the late

				Bronze Age which bore out radiocarbon dating of certain deposits. Additional important finds included fragments of two rare copper alloy pins (possibly of continental origin), possible votive offerings, and spelt wheat (not common at this time).
TQ 57 SW 191	Monument	280m E	Roman	Romano-British Channel and Gully, Lowfield Street. A broad, neatly-cut water channel was discovered, containing Romano-British pottery, flint flakes and heat-shattered stones. The feature seems to have been dug and silted during the Romano-British period (dated from pottery found). A narrow gully was also located, containing a mortarium, flint flakes, heat-cracked stones and animal bones. This was probably dug and silted during the life of the channel, to which it is certainly related.
TQ 57 SW 229	Monument	280m E	Neolithic / Bronze Age	Late Neolithic - Early Bronze Age Flint working site. During excavation work a quantity of struck flint artefacts were recovered. These were mainly flakes or waste, but also included some cores and retouched pieces (mainly scrapers). The assemblage was in generally good condition with only a few pieces showing patinating. There appears to be some evidence for flint working on the site, but no clear evidence yet for knapping in situ. Two edge-ground implements indicate a late Neolithic date for some of the assemblage with the others unclear. The excavators have suggested an overall date of late Neolithic to early Bronze Age.
TQ 57 SW 228	Findspot	280m E	Medieval	Copper Alloy Buckle. During excavation a copper alloy buckle was found of conventional medieval form and dated to between the 12th and 14th centuries.

TQ 57 SW 43	Findspot	240m ENE	Roman	Roman Coin. A second brass of Antoninus Pius was found by workmen, at an unknown date, near the junction at Princes Road and Lowfield Street, Dartford, and given to the Museum pre 1957.
TQ 57 SW 263	Findspot	490m E	Undated	Fragments of bricks at East of Lowfield Street. Moderate fragments of red and yellow stock bricks sealed by topsoil and scrub.
TQ 57 SW 372	Monument	360m NE	Modern	Lowfield Street, Munich Crisis air raid shelter trenches. They already existed in January, 1939, presumably originating in the Munich Crisis of 1938 and were later strengthened in concrete.
TQ 57 SW 169	Findspot	340m NE	Palaeolithic / Roman / Medieval / Post Medieval	Medieval and Post Medieval occupation site. Permission was freely given by the Council for a series of trial holes to be dug on this site on which the new Dartford Swimming Baths is being constructed. We started on 11th November 1973. The initial dig gave evidence of the ground being used for the town fair during the nineteenth century and of occupation by Medieval peoples, but no further material of archaeological interest was uncovered when the site was under surveillance during construction/excavation work by the contractors. The geological evidence of a marshy field cut by earlier streams was valuable information for future excavations on the Dartford river plane.
TQ 57 SW 381	Monument	340m NE	Modern	Fairfield Second World Wear air raid shelter. Three shelters were built sometime in 1940. Three structures are shown at Fairfield on a 1950s OS map. The shelters were demolished at an unknown date. No other details are known. The site is now occupied by Fairfield Pool. A 1944 aerial photo shows 6 shelters.

TQ 57 SW 259	Findspot	495m NE	Post Medieval	Flecks of CBM at East of Lowfield Street. Overlay with a thin layer of grey ash and clinker with flecks of Ceramic Building Material (CBM) frequent pea grit.
TQ 57 SW 311	Building	450m NNE	Modern	George V pillar box, 118 Lowfield Street. Letter Box Study Group Box Type: 27/2. Dates from 1933 to 1936.
TQ 57 SW 374	Monument	460m NNE	Modern	Heath Street Council School Second World War air raid shelter. Probably built in 1939. Made available in 1940 for members of the public outside school hours. There are no details of design.
TQ 57 SW 379	Monument	490m NNW	Modern	West Central Schools Second World War air raid shelter, Highfield Road. Available from 1940 for members of the public outside school hours. No other details known.
TQ 57 SW 21	Monument	505m NNW	Palaeolithic	4 Palaeolithic handaxes found during construction of Dartford Technology College in 1952. Three complete handaxes were found, and a broken handaxe butt. One of the handaxes was pointed and in fresh condition, and was found slightly deeper down in the terrace deposits, which were recorded as overlying Chalk bedrock between c. 26m and 29m OD. The two other handaxes were of more ovate/sub-cordate form and were slightly abraded.
TQ 57 SW 420	Monument	430m NW	Post Medieval	A possible dene hole, Lower Heath Lane. In 2006 a cavity was found on a building site opposite the junction of Lower Heath Road and Sycamore Road. The site had formerly been a chalk quarry and in the early 20th century a trench was dug out from the quarry to the north. This was possibly dug following the discovery of a dene hole, which the cavity was the only remaining trace.

TQ 57 SW 390	Monument	360m NW	Modern	Sycamore Road Second World War emergency water tank for 20,000 gallons somewhere in Sycamore Road, Dartford, Kent. It was in existence by October 1941 and would have remained in commission until 1945, to be removed early post-war.
TQ 57 SW 313	Building	420m NW	Modern	George V pillar box Sycamore Road / Heath Lane. Letter Box Study Group Box Type: 27/2. Dates from 1933 to 1936.

Figure 19: Gazetteer of KHER Records

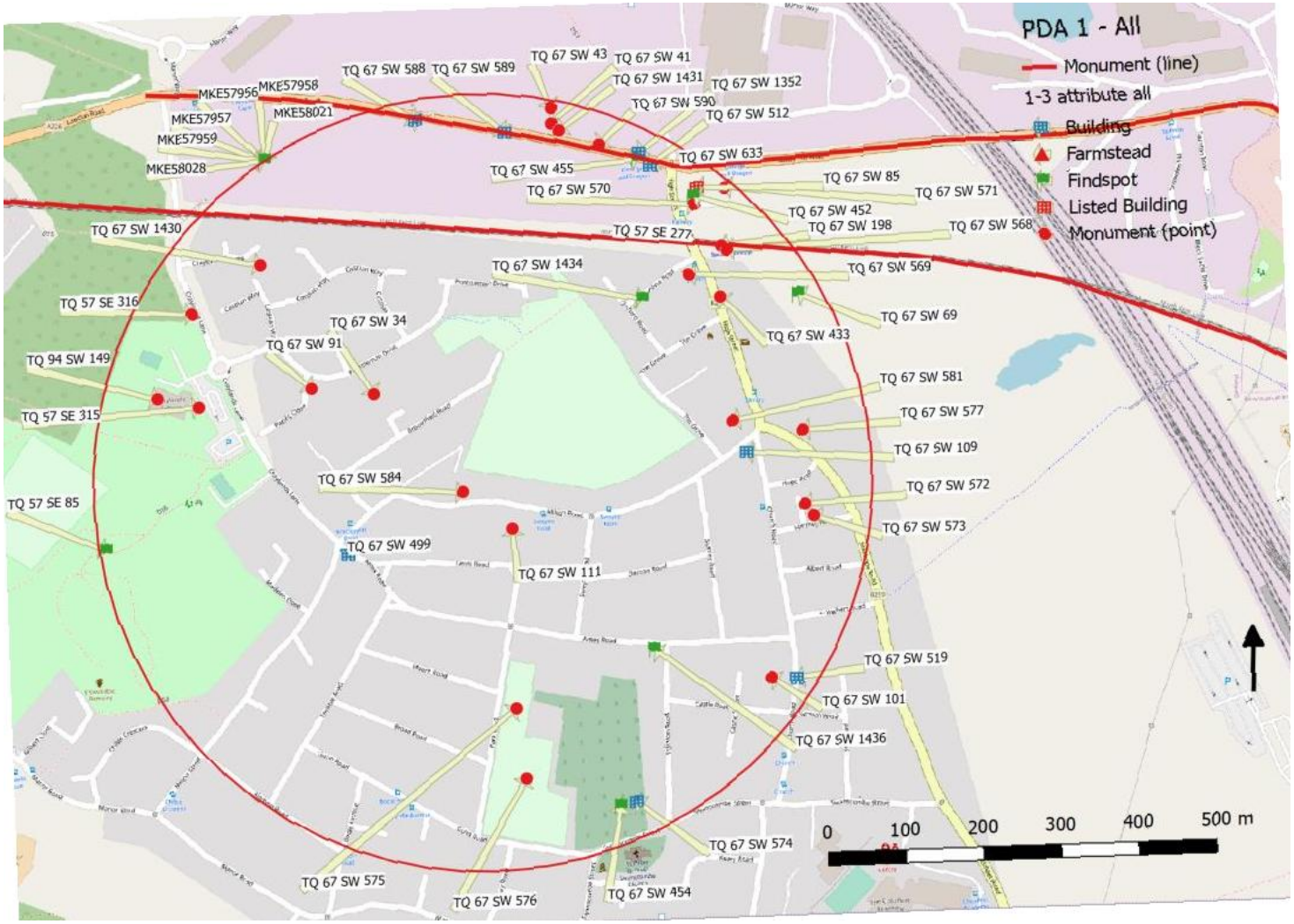


Figure 20: KHER Records PDA 1 – All

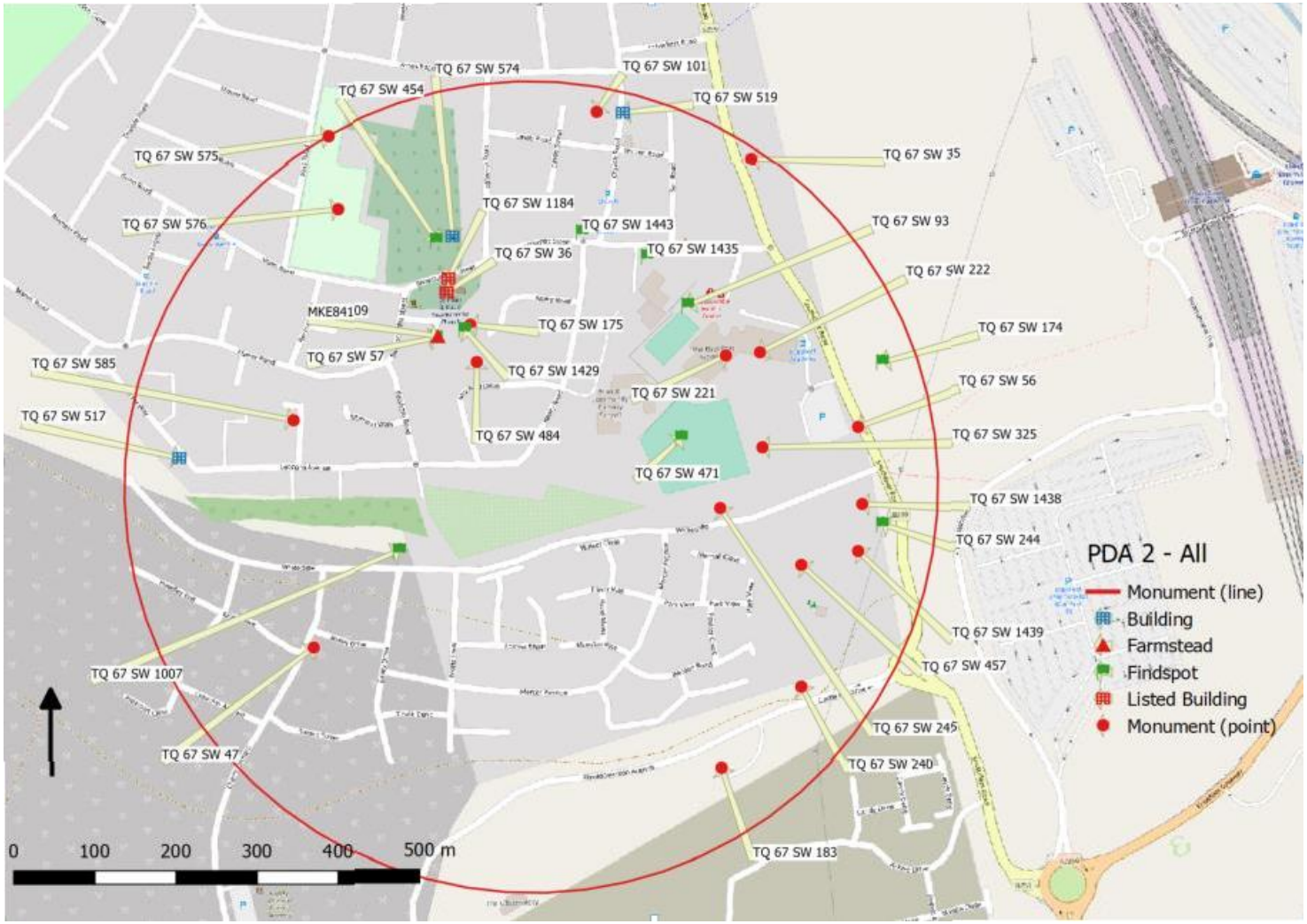


Figure 21: KHER Records PDA 2 – All

Figure 22: KHER Records PDA 3 – All

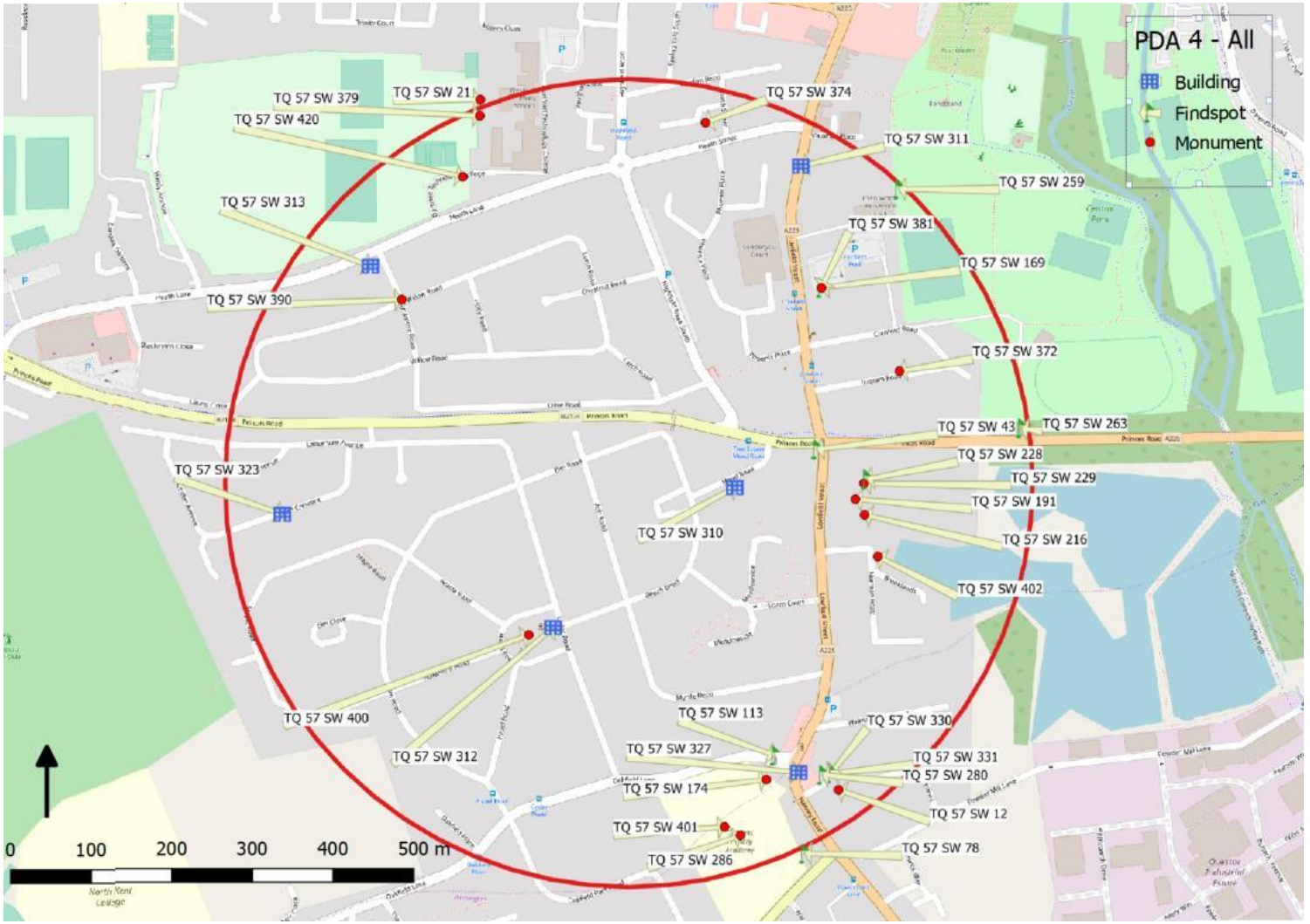


Figure 23: KHER Records PDA 4 – All

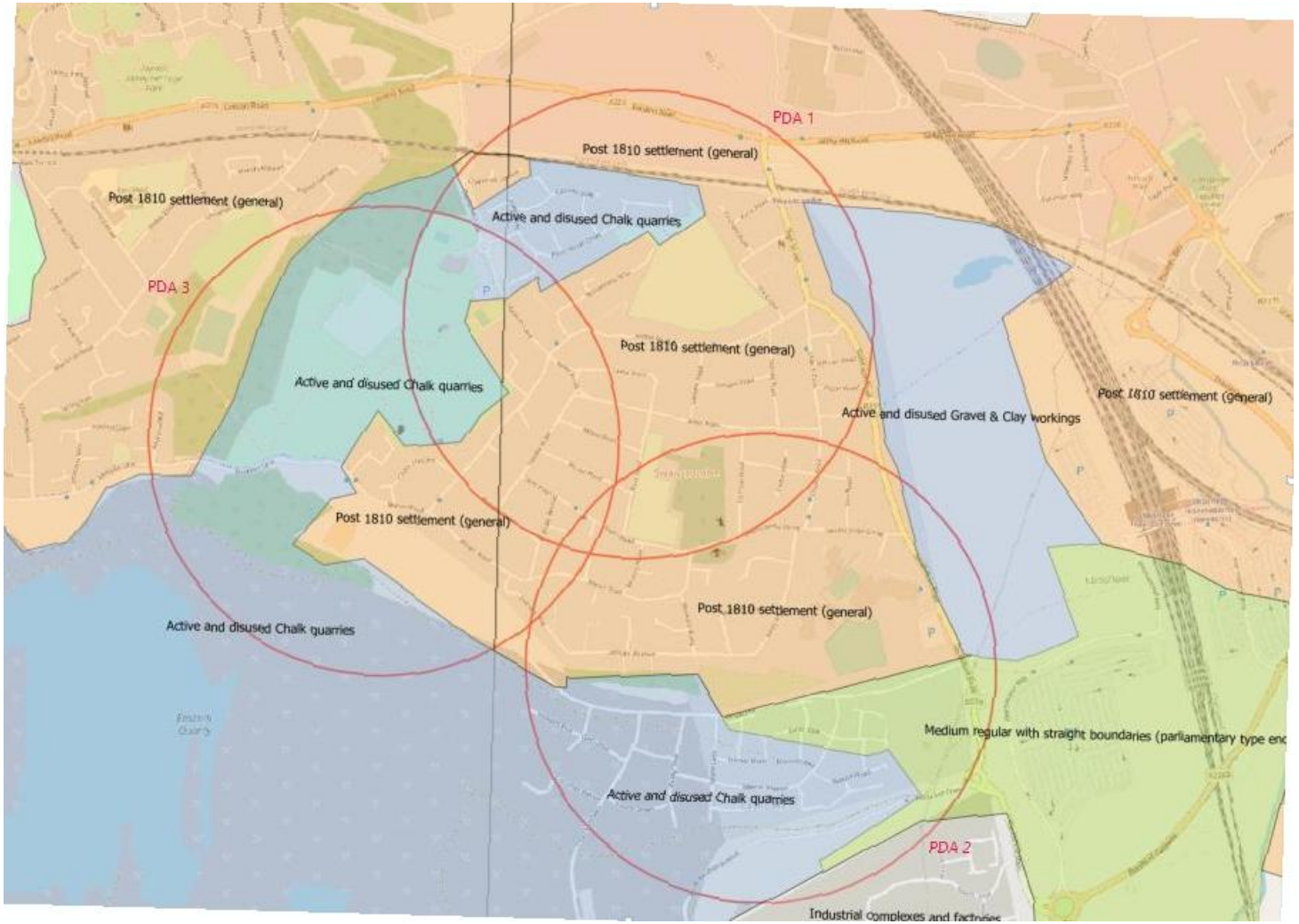

PDA 1
Post 1810 settlement (general)
Post 1810 settlement (general)
Active and disused Chalk quarries
PDA 3
Post 1810 settlement (general)
Active and disused Chalk quarries
Active and disused Gravel & Clay workings
Post 1810 settlement (general)
Post 1810 settlement (general)
Post 1810 settlement (general)
Active and disused Chalk quarries
Medium regular with straight boundaries (parliamentary type enc
Active and disused Chalk quarries
PDA 2
Industrial complexes and factories

Figure 24: KHER Historic Landscape Character, PDA 1-3

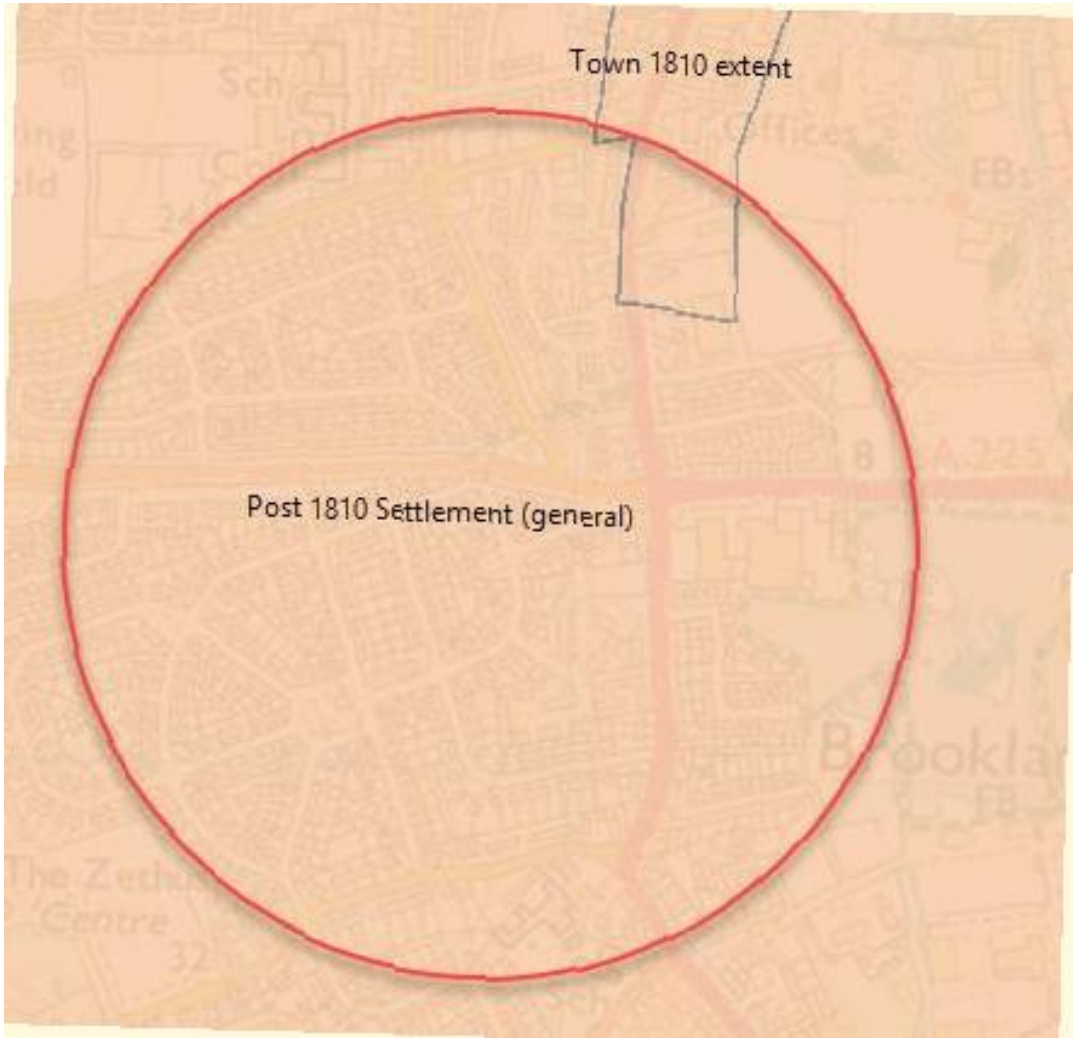


Figure 25: KHER Historic Landscape Character, PDA 4

Plate 1: 1940s. All at an altitude of 1.94km, showing PDA 1 (to the north), 2 (to the south) and 3 (to the west) (Google Earth).

Plate 2: 1960 (Google Earth)

Plate 3: 1990 (Google Earth)

Plate 4: 2007 (Google Earth)

Plate 5: 2018 (Google Earth)

Plate 6: 1940s, showing PDA 4. At altitude 482m (Google Earth)

Plate 7: 1990s, showing PDA 4 (Google Earth)

Plate 8: 2018, showing PDA 4 (Google Earth)